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ABSTRACT

The National Institute on Drug Abuse presents this booklet as the first in a series intended to summarize the empirical research findings and major theoretical approaches relating to the issues of drug use and abuse. This volume summarizes the major research findings concerning the effects of nonmedical drug use on employment. These findings provide the reader with the purpose, methodology, findings and conclusions of each study reviewed, and clarify the issues of drug use as it occurs in various professions, companies, the labor force in general and among addicts. Four reports on programs designed to control employee drug abuse are also summarized. (Author/SJL)

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Research Issues 1

DRUGS AND EMPLOYMENT

OE 010 067

NATIONAL INSTITUTE ON DRUG ABUSE

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10. Drug Themes in Fiction

Cover Illustration

William Blake. The figure of Urizen or the Ancient of Days.
Frontispiece from *Europe*. Illuminated printing.

DRUGS AND EMPLOYMENT

Nonmedical Use of Drugs in
Occupational and Industrial Settings

Edited by

Patricia Ferguson, M.L.S.
Documentation Associates

Thomas Lennox, M.L.S.
Documentation Associates

and

Dan J. Lettieri, Ph.D.
Division of Research
Behavioral and Social Sciences Branch
National Institute on Drug Abuse

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National Institute on Drug Abuse
11400 Rockville Pike
Rockville, Maryland 20852

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FOREWORD

The issues of drug use and abuse have generated many volumes of words, all written in an attempt to explain the "problem" and suggest the "solution." Data have been generated by researchers from many disciplines, each looking at a particular aspect of an issue. The present booklet is one of a new series intended to aid researchers who find it difficult to find the time to scan, let alone read all the information which exists and which continues to be published daily in their area of interest. An attempt has been made to focus predominantly on empirical research findings and major theoretical approaches.

Included in volumes 1 through 7 of the series are summaries of the major research findings of the last 15 years, formulated and detailed to provide the reader with the purpose, methodology, findings and conclusions of previous studies done in the topic area. Each topic was chosen because it represented a challenging issue of current interest to the research community. As additional issues are identified, the relevant research will be published as part of this series.

Several of the volumes in the series represent a departure from the above description. These also represent challenging issues, and issues of current interest; they are, however, virtually unexplored areas which have received little attention from the research world. For example, the subjects of drugs and the visual arts, science fiction, and fiction--aspects of contemporary life which impact on all of us--are explored here by writers who have been deeply involved in those fields. Their content is perhaps provocative, and certainly stimulating.

The Research Issues series is a group project of staff members of the National Institute on Drug Abuse, Division of Research, Behavioral and Social Sciences Branch. Special thanks are due to the continued guidance and support of Dr. Louise Richards and Dr. Norman Krasnegor. Selection of articles for inclusion was greatly aided by the suggestions of a peer review group, researchers themselves, each of whom reviewed a topic of particular interest. It is my pleasure to acknowledge their contribution to the project here.

Dan J. Lettieri, Ph. D.
Project Officer
National Institute on Drug Abuse

ACKNOWLEDGMENTS

A bibliographic project such as this necessarily involved a great number of people, all of whom contributed their own particular talent. Many worked on more than one phase of the project. Many more are not named here--their help and advice was instrumental in shaping and defining the series and the individual topics. It is important, however, to distinguish between the members of the peer review group who were instrumental in the initial selection of the articles to be included and abstracted, and the members of the abstracting team who bear sole responsibility for the final format and content of the abstract of each research paper included in this volume.

Peer Review Group

Michael Baden, M.D.
John Ball, Ph.D.
Richard Blum, Ph.D.
Carl Chambers, Ph.D.
Joel Fort, Ph.D.
George Gay, M.D.
Gilbert Geis, Ph.D.
Louis Gottschalk, M.D.
Raymond Harbison, Ph.D.
Richard Jessor, Ph.D.
Denise Kandel, Ph.D.
Gerald Kline, Ph.D.
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Stephen Pittel, Ph.D.
Louise Richards, Ph.D.
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Charles Rohrs, M.D.
Elaine Schwartz, Ph.D.
Saul Sells, Ph.D.
Irving Soloway, Ph.D.
Forrest Tennant, M.D.
Dan Waldorf, M.A.

The Abstracting Team consisted of: Greg Austin; David Harris; Susan Hope; Diane Kovacs; Cynthia Lundquist; Marianne Moerman; Roger Owens and Carolee Rosser.

PREFACE

An extensive and comprehensive literature search was carried out to identify materials for inclusion in the Research Issues series. Major clearinghouses, data bases, library collections, and previous bibliographies were searched, either through an automated system or manually. Special efforts were made to correspond with organizations, institutions and individuals who might have relevant materials. Current issues of newsletters and journals were scanned throughout the project. A selective list of the sources accessed includes:

National Clearinghouse for Drug Abuse Information (NCDAI)

NCDAI: Report Series, Selected Reference Series

Drug Abuse Current Awareness System (DACAS)

SPEED: The Current Index to Drug Abuse Literature

Grassroots

Addiction Research Foundation, Bibliographies

Drug Dependence

Psychological Abstracts (PASAR)

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Research in Education (ERIC: RIE)

Public Affairs Information Service (PAIS)

Monthly Catalog of U.S. Government Documents

Music Index

Art Index

Guide to the Performing Arts

Reader's Guide to Periodical Literature

The criteria for selection of documents were drawn up by a consultant group of drug researchers working with the contractor and representatives of the National Institute on Drug Abuse. For inclusion a study had to meet the following general criteria:

(1) empirical research studies with findings pertinent to the particular topic, or major theoretical approaches to the study of that topic

(2) published between January 1958 and January 1974, preferably in the professional literature, with the exception of certain older "classics" which merited inclusion and unpublished dissertations

(3) English language; however, since the focus was on American drug issues, those English language materials which dealt with aspects of drug use encountered largely in other countries were excluded.

After a first review of citations and annotations, to weed out obviously irrelevant materials, the body of collected literature was subjected to two reviews: one to ensure that materials met the selection criteria, and a second by a peer review group to ensure that studies representative of the universe were included.

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I. OVERVIEWS AND ISSUES

Trice, Harrison M., and Roman, Paul M. Spirits and Demons at Work: Alcohol and Other Drugs on the Job. Ithaca, New York: Cornell University, New York State School of Industrial and Labor Relations, January 1972. 268 pp. (429 references).

SUMMARY

Twelve job-based "risk factors" are identified and defined as social factors which increase the chances that deviant behavior will be continued. No causal connection is implied; rather, it is contended that these risk factors aggravate and reinforce deviant patterns that are already a part of the behavioral repertoire of the individual.

Extensive bibliographic research has been done, such that each factor, isolated and identified, has empirical support.

The 12 factors are organized into 4 general categories in which the work situation can encourage individuals to continue their drug use:

1. Low Visibility, includes those work situations which have unclear production goals, flexible work hours and output schedules, and which are not subject to close supervision.

2. Absence of Structure, refers to those positions whose occupants are going through transition, either because their former functions are being gradually eliminated or because they are assuming a role which is new to the organization.

3. Absence of Social Control, describes those job roles where the drug use of an employee is actually beneficial to others, and also stressful periods during which an individual moves from a closely supervised position to one which is controlled minimally.

4. Miscellaneous Factors, includes those instances where a work position provides no adequate outlet for resulting stress, where few rewards are available in a highly competitive work situation, and where the individual is exposed to drug users through work-related interactions.

The effect that drug use has on work performance is examined. Several reports on the effects of marijuana on performance are reviewed; the authors conclude that job impairment associated with heavy marijuana use is still much less severe than that caused by heavy alcohol use. Frequency of on-the-job use of amphetamines is observed, which results in temporary improvement in work

performance and participation. The authors indicate that the use of such stimulants is inevitable in a competitive society and predict that abuse of amphetamines may become a major health problem.

Drawing from a limited number of related research articles, the work stability of drug users is discussed. Although marijuana does not necessarily result in an inability to maintain a job over a long period of time, social values which are highly associated with such drug use may strongly influence the employment turnover.

In discussing the relationship between occupational stability and opiate use, a positive association is noted in some instances, especially among physicians and nurses. Amphetamine use and job stability are also apparently related.

Unlike alcohol users, drug users do not need to engage in elaborate schemes to hide the fact of their drug use. This is explained as the result of the lower social visibility of the effects of drug use, and its less disruptive nature.

Although the authors speculate that an association between marijuana use and absenteeism is possible, they report that no research data indicate such a relationship. No relationship has been established between absenteeism and stimulants or sedatives. It is noted that cigarette smokers have an unusually high rate of absenteeism.

There are no indications that marijuana users will be accident-prone while at work. It is suggested that novice users, still not used to the effects of marijuana, may not perform at their usual level while intoxicated. No relationship has been found between levels of accident rates and use of amphetamines or tranquilizers.

Citing the physician-addict as the example, the authors contend that opiate addiction need not impair job performance. The stereotype of the incompetent "dope-fiend" results from the necessity for addicts to immerse themselves into the addict subculture in order to assure a supply of the drug. The authors emphasize that addicts assured of an adequate supply would perform as adequately as any other employee.

However, the authors feel that despite the ability of the opiate addict to function adequately, maintenance of the opiate habit does severely impede job stability and performance. Constant sources of supply are not easily available, and the addict must expend much energy and time in maintaining a supply. The prohibitive cost of maintenance of a habit frequently results in employee theft.

The authors have included an extensive bibliography to substantiate their conclusions.

Ward, Hugh. Employment and Addiction: Overview of Issues. Washington, D.C.: The Drug Abuse Council, Inc., June, 1973. 55 pp. (90 annotated references).

SUMMARY

This fifth report in the Drug Abuse Council's monograph series analyzes current issues in the relationship between drug abuse and employment to enable treatment programs, rehabilitated addicts, employers, and government officials to achieve a clearer understanding of present problems and the urgent need for collective action. New York City is the primary focus of the report; the emphasis is on the role of employment in rehabilitation.

At hearings on the employment problems of the rehabilitated addict conducted by the New York City Commission on Human Rights in 1973, the author testified on the slim chances of employment for the ex-addict, who is typically a young unskilled Black male, frequently with a criminal record. The government has failed to provide or find jobs, the attitudes of private employers are changing very slowly, and there are no adequate opportunities for employment. The real answer would be large-scale public sector employment, which is unlikely. Changes in policy and increased government leadership were recommended; specifically, the creation of an independent organization to act as a job development, screening and referral agency to serve the rehabilitated addict as an intermediary between treatment programs and employers.

The sparse literature on treatment programs suggests that many rehabilitated addicts are employed; there is little material convincing employers to hire them, or aiding treatment programs in finding jobs.

Poverty fosters re-addiction. Rehabilitated addicts need to find decent jobs that have good pay, good working conditions, job security, and advancement opportunities. The author disagrees with Eli Ginzberg's optimistic view of New York's manpower situation. It is inapplicable to the ex-addict, whose credentials do not match available jobs.

Ward is particularly critical of the reluctance of the government to provide training and find jobs for rehabilitated addicts. This discriminatory attitude against both ex-addicts and employed drug users

works against the goals of treatment programs and sets a bad example for private employers. It is critical that government agencies at all levels change their policies and practices. Private employer attitudes are changing. Many have now realized that they need to help their employee drug abusers. Some have even tried to employ ex-addicts. But testimony from the hearings on "Employment Problems of the Rehabilitated Addict" constitute the most valuable document on this issue. While compelling in terms of the potential of ex-addicts, it clearly emphasized the need for more jobs, the lack of support services at work sites, and the inability of the ex-addict to meet normal job criteria. There are institutional barriers to employment: company insurance regulations, the practice of "credentializing", licensing requirements, criminal records, can all be used by a reluctant employer to discriminate against the ex-addict. Job developers and counselors should become familiar with these barriers and how to overcome them. The job development approach is more likely to achieve long-term results than current haphazard methods. It is the function by which the shared objectives of employer, treatment program, and client are brought into accord. The author presents some procedural guidelines for those trying to develop jobs for rehabilitated addicts.

Several important projects that employ rehabilitated addicts have been started: those supported by the Vera Institute of Justice (e.g., the Pioneer Messenger Service, the Wildcat Service), the Addiction Services Agency, PACT (Provide Addict Care Today), New York City's MCDA (Manpower and Career Development Agency), and Howard Samuel's Off-Track Betting Corporation. The ARTC (Addiction Research and Treatment Corporation) runs a skills training center in Brooklyn; there is a downtown center created by 5 Manhattan companies; Con Edison, Gimbels, the City Finance Department and others have all experimented with hiring addicts. The projects use varying approaches. While the number of addicts actually hired is not many, it is significant that these projects have been discussed publicly. This constitutes the main breakthrough and permits the possibility of future increase in such programs.

Employability is a new issue with its own contingent complexities. It will add to, not solve, the existing unsolved problems. The report concludes with 11 recommendations:

1. Policymakers and the public must view this problem within the general context of full employment, inflation, income maintenance, and the position of the urban poor.

2. Treatment expenditures need reevaluation regarding their value to clients and to society in general.

3. Better data must be collected and evaluated to determine the relationships between employment and drug dependence.

4. Present programs need further analysis to determine their success factors.

5. Direct subsidies to employers may not be the best policy; the use of diverted welfare funds by certain private employers may be better.

6. The issue of worker alienation and drug abuse needs further research.

7. Employer attitudes need closer examination. Discrimination against ex-addicts and ex-convicts may overlap; both problems may be better attacked simultaneously.

8. A separate study should be made of the problems of the Vietnam veteran.

9. Programs that coordinate the need for community services with transitional employment for ex-addicts should be considered.

10. Successful techniques for retaining employee drug abusers should be further identified.

11. Efforts to conduct different types of employment programs should continue.

In summary, employers should learn and do more, the federal government should show more leadership, both through example and funding, so that states and municipalities will follow. Policymakers in the drug field have failed to discuss job issues, to seek manpower services for the clients of treatment programs, or to provide such programs with resources or assistance to set up manpower services. The programs themselves have failed to point out the need for such services and failed to adjust their activities to provide them. The treatment community must begin to work cooperatively and constructively with public and private employers. However, progress may not occur swiftly enough to satisfy client employment demands. The current economy and the jobs it creates may well not provide enough work for rehabilitated addicts.

Kieffer, Sherman N. Summation of conference. In: Carone, Pasquale A., and Krinksy, Leonard W., eds. Drug Abuse in Industry. Springfield, Illinois: Charles C. Thomas, 1973. pp. 153-163.

SUMMARY

This chapter summarizes a conference on "Drug Abuse in Industry" held at South Oaks, Long Island, New York, in April 1972. The summary describes papers presented, questions raised and tentative conclusions reached.

The first session dealt with drug abuse from the point of view of the medical examiner. Dr. Leslie Lukast noted that deaths from alcohol outnumber deaths from heroin and barbiturates. Deaths from barbiturates outnumber deaths from heroin by three times. Concern was expressed over the adverse affects of multiple drug use. Professor Roizin discussed findings associated with multiple drug use, showing that the liver was the most strongly affected organ. He suggested use of professionals, and ex-addicts in all phases of treatment. Secondary drug effects were also discussed as they pertain to drug fatalities. Deaths are often caused by these secondary effects rather than by the drug itself.

Dr. Louis J. Milone, Director of Probation for Nassau County, described the probation department's approach to treatment: looking at the drug abuser as a total person, including the pattern of his drug abuse, medical and psychiatric history, and current status. The treatment program is then tailored to meet the needs of the particular individual.

The labor union's view of drug abuse was also presented, using the alcoholic as a model. Forms of help need to be union-centered to be maximally effective. The union should train its own counselors and play a significant role in establishing treatment programs for employees. Mr. Sanford Lenz of the International Union of Electrical Workers described a drug abuse program proposed by the Long Island Retail Clerks Union. In this comprehensive program, supervisors would learn to identify drug problems, and a counseling center would provide help in outlining a treatment program. Those employees found to have a good prognosis would be treated while working, subject to urine testing. If rehabilitation were necessary,

employees could be guaranteed employment following satisfactory treatment. College attendance for union members was proposed, based on the assumption that it would lead to an improved self-image, and thus, decrease the chance of turning to drugs as an escape from reality.

It was agreed that often the tedious nature of work may turn the worker to drugs. Endowing every job with some factors of responsibility in the industrial process was proposed.

Specific suggestions included: (1) industry should pay a fair wage and finance programs of drug research and education; (2) the drug industry should take responsibility to find effective drug antagonists, industry in general should end discrimination against addicts; (3) the drug industry should initiate and enforce voluntary curbs on the manufacture of addictive and dangerous drugs; and (4) the medical and health industries should provide more training programs for physicians in the area of drug abuse. It was generally concluded that everyone involved has a responsibility to provide aid for drug abusers.

Dr. Stanley Yolles emphasized the need for preventative aspects in industrial mental health programs, rather than treatment aspects alone. He stated that industry might play an important role in the methadone maintenance program by providing jobs for rehabilitated addicts.

Dr. Mark E. Fox, Medical Director of the Long Island Railroad, discussed identification of the employee who uses drugs. He placed particular emphasis on the addict as a consistent liar and the consequent difficulty in obtaining histories. This was a statement with which the author of the summary disagreed.

It was generally agreed that the punitive aspect be removed from industry's attitude concerning employed drug abusers.

It was suggested that companies develop policies with guidelines in at least 5 areas: screening, detection, rehabilitation, discipline, and termination. The medical director's role was seen as helping to educate management to increase their support for realistic mental health programs.

CONCLUSIONS

Treatment of drug abusers was discussed in terms of its effectiveness, cost, and setting. It was pointed out that 10% of addicts seem to get well no matter what treatment is used. Small programs treating homogeneous socio-cultural groups were shown to have better results than programs treating heterogeneous populations.

Urban, Maryann L. Drugs in industry. In: National Commission on Marijuana and Drug Abuse. Drug Use in America. Vol. I. Washington, D.C.: U.S. Government Printing Office, 1972. pp. 1136-1156. (72 references).

SUMMARY

Industry's position towards drug abuse among its employees, as evidenced by studies, surveys, and conferences is reviewed.

Industry's response to the employee drug abuse problem has progressed from initial denial to retaliatory punitive measures to the development of in-house or extra-company counseling and follow-up procedures. As industry began to recognize the problem, representatives of large, East Coast, metropolitan area companies began to meet for discussion of the issues. Businessmen from small areas refused to acknowledge the increased exposure to drugs of the young people whom they might later employ.

In April, 1970, the AFL Community Services Committee sponsored one of the first union seminars. Union involvement focused on drug information campaigns for the next several years.

The "First Symposium on Drug Abuse in Industry," sponsored by several large companies in May, 1970, included policy formation and description of sample policies for varying sized companies as well as drug screening procedures.

Surveys.

The 1970 survey undertaken by the Conference Board remains the most extensive survey of management's perception of the extent of employee drug use. The survey included 222 firms, 131 manufacturing companies and 91 nonmanufacturing companies of varying size and locale. Most companies either had experienced employee drug use or believed they soon would. More than 1/2 planned in-house programs to counteract drug use. Firms in large urban centers reported the highest incidence; heroin use was thought to be uncommon, while use of other drugs was relatively common. Management tended to be much sterner in dealing with drugs than with alcoholism or other behavior problems.

The New York State Narcotic Addiction Control Commission directly interviewed 7,500 persons, age 14 or older, in 1970. The survey provided statistics on the extent of use of 12 classes of drugs, 8 legal and 4 illegal. Sixty-five percent reported use of any of these drugs at

least once. The drugs most frequently used on the job were marijuana, pep pills, and minor tranquilizers. Sales workers used more drugs than any other segment of the labor force, and a considerable number used heroin while on the job.

In 1972, the National Commission on Marijuana and Drug Abuse gathered data on companies' policies with regard to employee drug use. Questionnnaires were sent to 125 companies; 36% of the firms responded. Approximately 2/3 reported no experience with drug use by employees. Less than 1/2 of the companies indicated they had adopted or intended to adopt a formal policy concerning employee drug use and related behavior. The majority of those who formed policies responded to possession, use, sale or distribution of drugs by terminating employment.

The most significant finding, however, was the preponderance of companies claiming there was no drug use by employees, in spite of mounting evidence to the contrary. Such an attitude indicated ignorance on the part of supervisors and employers and an unwillingness to face up to the problem.

In 1973, a New York-based group, "Provide Addict Care Today," (PACT), sent a questionnaire to 300 major, private sector New York employers. Thirty companies responded; fourteen completed the questionnaire. Eight companies had a written policy on employee drug use. There was a strong positive correlation between assisting employees, having a written policy, and planning to expand hiring.

Approaches.

Urinalysis is being used increasingly as a method of screening out drug users, particularly as a pre-employment measure. Sole use of urinalysis as a mode of identifying drug use or misuse has been found to be questionable both scientifically and ethically.

Federal, state, and local government face the same problems of employee drug use; however, no formal federal policy on this problem has been issued.

Some employers' responses to drug using employees and former drug-dependent persons represent enlightened approaches while others operate in a vacuum with little or no consideration for the realities of the environment. Examples of both approaches include a manufacturing company that refers drug using employees to a mental health clinic or hospital. A large Pennsylvania company does not fire drug dependent persons, rather it rehabilitates them. One major corporation claimed to be the first in the country to publicly announce a policy of non-discrimination in the hiring of rehabilitated drug addicts.

Recommendations

The following recommendations are made in light of existing needs and problems:

1. Widely used management procedures and supportive, detached research should be employed to assess the depth and breadth of drug use in work organizations.

2. It is important that management know the extent of employee drug use so that a reasonable policy can be formulated. The first prerequisite of an effective, well planned response to the problem of employee drug use is an accurate description of the problem itself.

3. Industry should consider alternatives to termination of employment for those involved with drugs. Where the nature of the business allows, employees should be referred to company-run or other public and private rehabilitation or counseling programs.

4. Supervisors play a crucial role in identifying early signs of a problem situation. If there is impaired performance, the supervisor must make the employee aware of the services that are available.

5. It is important that treatment resources be readily available within the community. All treatment and rehabilitation must be kept confidential to encourage employees to accept counseling and other assistance.

6. The business community should not reject an applicant solely on the basis of prior drug use or dependence, unless the nature of the business compels doing so.

7. The major conclusion of a series of studies on rehabilitation programs, was that employers and treatment programs are out of touch; and that both treatment programs and employers are hypocritical with regard to employment as an important element in the rehabilitation process.

Leonard, John W. Dismissal for off-the-job criminal behavior. Monthly Labor Review, 21-26, November 1967.

SUMMARY

This article dealt with the role that management has assumed in the instance of employee criminal behavior outside the job. The issue of "just cause," which governs dismissal for on-duty misconduct, becomes less clear in these cases. Although management has no authority to punish every act of immoral conduct in the community, the employee's obligation to his employers does not cease the moment he leaves the company's premises.

Management's position has been that continued employment of an employee who had allegedly, or actually, engaged in criminal activity would result in harm to the business of the employer. Arbitrators have upheld the discharge of an employee when the employee's criminal activity was found to be tied to the employment relationship through injury to the employer's business.

The article cites examples wherein the arbitrator agreed to the dismissal of employees. Such an employee might be habitually consorting with criminals and prostitutes, while the job called for the employee to work alone in customers' homes.

Arbitrators have considered the type of crime, the degree of publicity and its probable consequences and the type of job held by the employee. All of these would determine whether "obvious harm" was being done to the employer's business.

Discharges were reversed in cases in which no obvious harm could be found. An employee was discharged upon conviction for possessing narcotics. The employee was reinstated because the court's sentence of 2-years' probation indicated that the worker was not potentially dangerous to society; hence, injury to the employer was unlikely.

The article also mentioned cases in which a manager felt that there would be a disruption of the company's relationship with employees, in addition to customer reaction. Also, the violence of particular crimes convinced arbitrators that an employee presented a threat to the society of fellow employees.

One of the major sources of difficulty in criminal behavior cases is the relationship between the status of the accused employee before the court and the proper disciplinary action to be taken. Arbitrators have tried to decide on the appropriate course of action in the case of employees who have been tried and acquitted, only arrested and charged, or are involved in appealing their convictions. In these cases, it would appear that a relatively lengthy suspension would be more reasonable than a premature discharge based on the employer's determination of guilt.

There are no general principles available which will lead to automatic prediction of the outcome of cases of off-the-job criminal activity. Arbitrators have established broad and somewhat nebulous guidelines, but the infinite variety of circumstances has prevented the establishment of a single general principle to deal with such cases.

II. DRUG USE IN SPECIFIC PROFESSIONS

Watkins, Charles. Use of amphetamine by medical students. Southern Medical Journal, 63(8):923-929, August 1970.

DRUG	Stimulants
SAMPLE SIZE	233
SAMPLE TYPE	Students
AGE	Adults (18-64)
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New Orleans, Louisiana
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	20

SUMMARY

The author presents a study and review of the use of drugs among medical students and physicians. The study is based on the report of Smith and Blackly, "Amphetamine usage by medical students," 1966. The author received permission to utilize the same questionnaire to study medical students at the Louisiana State University School of Medicine, New Orleans.

Findings differed from those of the Oregon Study. Not as many students responded (233) as in the Oregon group, but among those 126 (54+%) reported having used amphetamines while 107 (45%) reported no experience with the drug. These figures reversed the

Oregon findings and indicated a considerably greater usage by the Louisiana students. Differences also occurred in the initial source of the drug (doctor or friends), as did the time of the initial use of the drug. A contrast also existed in the continued use of the drugs. Sixty-four (51%) had stopped use completely, in contrast to 58% for the Oregon group. Twelve (9%) had increased use of amphetamine in comparison to only 2% of the Oregon study. Reasons given for use of the drug did not coincide.

To analyze these findings, the author reviewed literature touching on four related subjects: (1) drug abuse in general; (2) drug abuse among college students; (3) drug abuse or psychiatric illness in medical students; and (4) drug abuse and psychiatric illness in physicians. Included in this discussion was the World Health Organization Statement on "drug dependence." The author also reported on the world-wide problem of amphetamine use.

The author speculated that 11% of the respondents could be classed as a group who are trying new experiences. Most of these individuals would drop usage unless they found it particularly satisfying. However, the fact that 75% used the drug to reduce fatigue or to initiate learning was alarming. The author suggested special attention should be given to medical education programs so that they might become psychic stimulants to learning rather than psychic trauma that interferes with students' development of their full potential.

METHODOLOGY

A questionnaire developed by Smith and Blackly was submitted to a total of 513 medical students before the end of the school year. Questionnaires were submitted with a cover letter explaining that this research was repeating a study done at another school. The only difference in procedure was the lack of a medical student coinvestigator.

FINDINGS

Among Louisiana students, 126 (54%) reported amphetamine use, while 107 (45+%) had not used it. Of the users, 76.5% stated that initial use was at a peak time of pressure from work (upcoming exams, overdue papers, etc.). Louisiana students cited friends to be their initial source (67.7%), with only 13.5% naming doctors (the Oregon study found these groups almost equal).

Seventy-two percent of the LSU students first used the drug in college, as compared to 35% of Oregon students. Even more striking, 54% of the LSU individuals used the drug initially in the first 2 years of college, while only 11% of Oregon students did the same. Sixty-four, or 51%, had stopped use completely, in contrast to 58% for the Oregon group. Thirty-seven (29.3%) had increased use, 13 (10%) remained at the same level and 12 (9%) decreased usage, in contrast to 20% of the Oregon students.

Reasons for usage varied. In the Oregon study reduction of fatigue or facilitation of learning accounted for 76%; in the LSU group, it was 76.5%. Twenty-two percent reported the drug facilitated learning in the Oregon group while 78 (39%) LSU students reported the same. On the other hand, only 75 (37.5%) at LSU reported amphetamine use to minimize fatigue while 54% did in the Oregon study.

CONCLUSIONS

The author found little information about individual users and their psychological make-up. However, he found alarming the fact that 75% of the respondents indicated usage to reduce fatigue or facilitate learning. That many students find it necessary or desirable to use artificial stimulation should encourage further questioning: (1) Are students unqualified for the profession they are anticipating for themselves?; (2) Are students intellectually qualified but emotionally handicapped?; (3) Can a student be intellectually qualified and psychologically sound, but the school itself be responsible for setting unreasonable demands?

The author felt that attention should be given to education programs so that they become psychic stimulants rather than traumatic experiences. He concludes that the vast majority of medical students who take amphetamine will neither become members of the drop-out generation nor physician drug addicts. However, the fact that 1% of physicians do become narcotic addicts during their professional career as physicians and 4% alcoholics, warrants action to reduce this attrition.

Hill, Harris E.; Haertzen, Charles A.; and Yamahiro, Roy S. The addict physician: A Minnesota Multiphasic Personality Inventory study of the interaction of personality characteristics and availability of narcotics. Research Publications of the Association for Research into Nervous and Mental Diseases, 46:321-332, 1968.

DRUG	Opiates
SAMPLE SIZE	238
SAMPLE TYPE	Physicians, Treatment(inpatient)
AGE	Adults
SEX	Male
ETHNICITY	White
GEOGRAPHICAL AREA	More Than Two Cities
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Psychological Tests
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	21

SUMMARY

Measures of personality of addict physicians were compared with those of nonaddict physicians and with a representative sample of hospitalized Caucasian addicts. The purpose was to gain further information on personality of addicts and to assess the possible interaction with differences in availability of narcotics.

The addiction rate among physicians has been estimated to be one in 40 to 100, as opposed to one in 3,000 to 10,000 for the general population of the United States.

An inverse relationship was found between deviant personality scores and assumed degree of availability of narcotics. Addict physicians were significantly higher than nonaddict physicians on nearly all scales and showed neuroticism and considerable indications of maladjustment. The general addicts presented more specificity and significantly greater deviation than the addict physicians on nearly all scales.

METHODOLOGY

The data for this study were provided by 3 earlier studies (Painting, Peterson, and Putnam), all of which used the Minnesota Multiphasic Personality Inventory (MMPI) as a standard personality test. The group form of the test with standard instructions was used. Forty-two valid MMPI tests were obtained from physician addicts (Putnam). The mean age of the physician sample was 42.8 years. Only those listed in the American Medical Directory were used. The sampling was accepted as being representative of addict physicians who stay for treatment at this hospital. In comparing this group with the nonaddict physician, certain reservations were expressed because they were not matched for age, medical specialty, geographic distribution, etc.

Painting's general hospitalized addicts were a group of 81 white male addicts who were tested on the MMPI as part of a larger study. Mean age was 37.4 years. This sample was believed to be typical of general hospitalized addicts at this hospital.

Peterson's nonaddict physicians were 115 practicing physicians in North Carolina. The physicians were selected by a randomizing sampling procedure from the Directory of the North Carolina Medical Society. The sample was believed to be typical of the population from which they were drawn. Comparisons were made between the above described groups with some caution.

FINDINGS

Three quite different profiles were obtained: the nonaddict physician produced normal scores; the physician addicts showed significant elevations; the general population addict showed the greatest degree of deviation. In comparing the addict groups an inverse relationship was found between degree of personality deviation and degree of legal or quasi-legal availability of narcotics. The group of North Carolina physicians scored well within the normal range on all scales.

Results of addict physicians' scores suggested that this group was heterogenous in personality traits. For a group, elevations indicated considerable pathology. The scores also suggested that

this group exhibited a considerable degree of sexual instability and deviation without showing homosexuality. The psychopathic deviate scale was very significantly different from the mean of North Carolina physicians, showing that this group had psychopathic tendencies. The general pattern of scores of the addict physician and the North Carolina physician were found to be quite similar. Much greater differences were found between the hospitalized Caucasian addict and the addict physicians than between the latter and the North Carolina physicians.

Sampling difficulties did not justify generalizations on the basis of the present data, but they did justify some cautious comparisons. The present addict groups showed an inverse relationship between personality deviation and legal or quasi-legal availability of narcotics.

Psychopathic deviation seemed to be a common characteristic of the delinquent groups, but seemed to be a general predictor only and was not specific to addiction in general.

Other investigators have mentioned several factors in physicians' addiction. Among them were overwork, physical ailments, and chronic fatigue. Several have mentioned the discrepancy between the addict's desired achievement and his actual attainments. Many have unrealistic goals and fantasies of omnipotence.

CONCLUSIONS

Much more could be done to rehabilitate the addict physicians. Results from a California program of treatment of addict physicians have been encouraging. The greatest hope would be in the direction of prevention, such as more adequate instruction in medical schools concerning the danger of self-medication. Longitudinal studies might be undertaken to investigate the possible relationship between personality characteristics, aptitudes, and later addiction in the physician.

Vaillant, G. E.; Brighton, J. R., and McArthur, C. Physicians' use of mood-altering drugs: A 20-year follow-up report. New England Journal of Medicine, 282(7):365-370, February 1970.

DRUG	Amphetamines, Tranquilizers, Sedatives
SAMPLE SIZE	45
SAMPLE TYPE	Occupational
AGE	46 ± 1
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1949-1967
NO. OF REFERENCES	14

SUMMARY

This study represents a 20-year follow-up report on the use of alcohol, tobacco and mood-altering drugs by 45 physicians and 90 matched controls during the period 1949 to 1967. As college sophomores both groups had been selected for better than average physical and psychological health. Data from periodic questionnaires showed that physicians used more tranquilizers, sedatives and stimulants than the controls; 5 suffered hospitalization and/or socioeconomic damage as a result of drug and alcohol abuse, as opposed to only 1 control.

METHODOLOGY

In the late 1930's, 268 male students at a liberal-arts college were chosen for a longitudinal interdisciplinary study. All were judged comparatively free of physical, emotional and academic difficulties. Forty-five of this group became physicians. A study of the physicians' use of alcohol, tobacco and drugs over a 20 year period was made. Ninety controls were obtained by selecting two nonphysicians alphabetically adjacent to each physician.

The principal data was the written response of the sample and the control to the following questions, asked by mail questionnaires:

1) "Cigarettes per day: 0/1-10/11-19/1 pack/ between 1 and 2 packs/2 packs or more," in 1949, 1953, 1957, 1964 and 1967. (In the same years similar information about pipe and cigar smoking was collected.)

2) "Use of alcohol: none/rarely/occasionally/few regular/ many irregular/many regular" in 1949, 1953, 1957, 1964 and 1967.

3) Whether they had trouble controlling their drinking in 1953, 1964 and 1967.

4) Whether they increased their use of tobacco and alcohol under stress in 1954, 1967.

5) Whether they took "any medicines or drugs" in 1949, 1957 and 1964, and more specifically if they used "sedatives" in 1951 or "tranquilizers," "sedatives" or "stimulants" in 1966-67.

The data is supported by interview and retrospective confirmation of the questionnaire answers. Ratings of overall drug and alcohol use were made independently by two members of the research team.

FINDINGS

Doctors were matched with controls for the following characteristics: age, father's income on college entrance, private-school preparation, scholastic and mathematical aptitude on college entrance examinations, psychological soundness ratings while in college, and feeding problems during infancy. Results were comparable for the two groups.

Follow-up information on the 135 men in the study was nearly complete.

Sixty-nine percent of the physicians graduated from the medical schools of Columbia, Harvard, Rochester, Pennsylvania and Johns Hopkins; 78% passed their specialty boards, and almost 50% had held the rank of assistant clinical professor or above at a medical school. Occupational success of the controls seemed fully comparable.

The maximum use by both groups during a 20-year period of amphetamines, tranquilizers and sedatives was analyzed in five categories: (1) no mention of use, (2) "occasional" use (1 mention) (3) "occasional" use (2 mentions), (4) regular use, and (5) abuse. Regular use referred to the use of sleeping pills more than once a month for several months, frequent use of amphetamines, or daily use of prescription tranquilizers for more than a month. Abuse indicated use beyond the usually prescribed limits.

More use in the occasional and regular use categories was reported for each drug type by physicians than controls. Five percent of physicians reported abuse of sedatives, vs. 1% of the controls. The regular use of sedatives by physicians (13%) was significantly greater than that by the controls (4.5%). Only one male, a physician, experienced prolonged social and occupational impairment because of the use of drugs. Four physicians and one control combined barbiturate use with amphetamine use, but apparently not on a daily basis.

The maximum use of alcohol during a 20-year period was analyzed by five categories: (1) rare or occasional, (2) "few regular" drinks, (3) heavy drinking for 1 period, (4) prolonged heavy drinking, and (5) social or occupational damage. The data showed no difference in the drinking patterns of the two groups. The combined percentage of both groups reporting heavy drinking for one period increased with age, from 3% at 28 to 16% at 46.

The smoking habits of physicians and controls were compared over a 28-year period. Over this period the total percentage of smokers remained about 60%. As a group, physicians included fewer heavy smokers and also fewer nonsmokers.

The maximum use of both mood-altering drugs and alcohol for the two groups was analyzed by five categories spanning (1) almost no use to (5) use indicating hospitalization or socioeconomic damage. Sixty-two percent of the physicians and 32% of the controls fell in the ranks 3 to 5 or within categories indicating a use rate greater than occasional. However, much of the physicians' increased use is accounted for by sleeping pills. Three physicians fell into group 5; these physicians had suffered occupational incapacitation and/or hospitalization. Only 1 control was classed in group 5; no controls reported hospitalization. Heavy use of drugs, alcohol and tobacco occurred together. At some point all three physicians in group 5 used drugs and alcohol to excess. Nineteen percent of the men in groups 4 and 5 were heavy smokers, the highest percentage cluster within the groups.

Neither the presence of feeding problems nor the absence of breast feeding in infancy was correlated with increased drug or alcohol use. Forty per cent of the men classed lowest in psychological soundness in college fell in groups 4 or 5, the heavy use groups. This factor, however, did not account for the difference in drug use between physicians and controls.

CONCLUSIONS

The physicians in the sample, selected for health in college, have less of a problem with alcohol than the general population, but these physicians take pharmacologic agents more than matched controls do. The physicians' use of drugs is accompanied by a use of alcohol and some form of tobacco that is at least comparable to that of businessmen. Doctors at both the healthy and the pathologic end of the continuum show a relative excess of drug use.

The author hypothesizes two reasons for addicted physicians' use of drugs: highly developed altruism based on earlier psychological deprivation that results in "overwork," and an inability to realize that addiction is possible.

Putnam, Peter L., and Ellinwood, Everett H., Jr. Narcotic addiction among physicians: A ten-year follow-up. American Journal of Psychiatry, 22:745-748, 1966.

DRUG	Opiates
SAMPLE SIZE	136
SAMPLE TYPE	Occupational
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	More Than Two Cities
METHODOLOGY	Longitudinal
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics
DATE(S) CONDUCTED	1952-1962
NO. OF REFERENCES	9

SUMMARY

Approximately 2 percent of the male discharges from USPHS in Lexington, Kentucky, in 1952 were physicians, most of them over the age of 40. Morphine and meperidine were the most commonly used drugs by these physicians. This study compares 68 of these male physician addicts with 68 other male physicians listed in the same AMA Directory with controls for age and geographic distribution. Attrition from AMA directories and changes of location over a 10-year period (1952-1962) were the main focus of this study. The purpose of the study was to assess the ramifications of addiction on the future life of the physician.

METHODOLOGY

The names of 68 male physicians were obtained from lists of discharged patients from the USPHS in Lexington, Kentucky, for 1952. In order to be included in the study, their names had to appear in the 17th, 18th, and 19th editions of the AMA directory. Using the same directories, 68 male control subjects were chosen, matched for age (plus or minus one year) and residence in the same state.

Statistical tests were performed by using two by two Chi-square test of significance based on data obtained solely from the three (1952 through 1962) AMA directories: date of birth, name of medical school, date of graduation, date of licensure in the state, type of practice, membership in any medical organization, and specialty.

FINDINGS

In this study changes of address or subsequent absence of listing within the AMA directory were thought to reflect the disruptiveness associated with drug abuse among physicians. While there were no significant differences in AMA specialty or kind of practice between the patient group and control group, there were significant findings.

Members of the patient group moved from city to city twice as often as the controls. After 10 years only 57 percent of the patient group remained listed in the directory, while 81 percent of those in the control group were still listed. This difference is significant at $p < .01$. There was no correlation between the type of drug used and psychiatric disorder. There was no significant (at $p > .20$) relationship between the number of hospitalizations and attrition.

CONCLUSIONS

While drug addiction has been described as a major occupational hazard of physicians, little has been understood about the eventual adjustment of the physician who has been hospitalized for addiction. Multiple factors have been involved in the physicians' initial use of drugs, including drug availability and self-treatment by physician addicts. While it has been shown that physicians with a history of addiction move from one city to another twice as often as other physicians, it is also known that they often continue to maintain both marriage and profession in spite of the addiction. Failure to appear in subsequent directories indicated disruption in the careers of the patient-physician. This study has emphasized the need for other studies of treatment and follow-up and suggests an AMA central, coded registry for the longitudinal study of addict-physicians. Further studies have also been suggested in order to better understand the emotional problems of physicians and the factors which lead to their becoming addicts.

Poplar, Jimmie F. Characteristics of nurse addicts. American Journal of Nursing, 69(1): 117-119, January, 1969.

DRUG	Multi-Drug
SAMPLE SIZE	90
SAMPLE TYPE	Occupational Nurse and Treatment
AGE	Adults
SEX	2 Male, 88 Female
ETHNICITY	6 Black and 84 White
GEOGRAPHICAL AREA	Lexington, Kentucky
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews, Observations, and Questionnaires
DATE(S) CONDUCTED	1962 to 1967
NO. OF REFERENCES	0

SUMMARY

The author presents considerable evidence to support her contention that nurse addicts present different backgrounds, personality characteristics, and job problems than other addicts who have been hospitalized. Because of specific anxieties and concerns that they confront, the author suggests ways in which future colleagues and employers can be of help to the nurse with a history of hospitalization for drug addiction.

METHODOLOGY

The unit supervisor for the women's withdrawal unit at the National Institute of Mental Health Clinical Research Center at Lexington, Kentucky , through observations, interviews and questionnaires, studied 90 registered nurses who were hospitalized for drug addiction. The study lasted over a five year period from 1962 to 1967.

Two methods were used to better understand the ways in which nurse addicts differ from other addicts. One was the weekly meeting, with the author and all registered nurse patients in attendance. The other method was a questionnaire which was distributed to the 90 nurse patients.

Follow-up consisted of some correspondence, initiated by the author, with former nurse patients, as well as information that could be informally gathered from other patients and personnel.

The author also quoted from test protocol, obtained by a hospital psychologist, from another group of nurses who had been hospitalized during the years 1960 to 1962.

FINDINGS

The weekly meetings elicited 3 major concerns in connection with discharge: whether to advise future nursing service employers of their history of addiction, fear of handling narcotics keys, and concern as to whom they could turn in case of need.

The questionnaire, given to all 90 nurse addicts,provided the author with the following information: The average age of the nurses was 41. 7, as compared with an average age of 30 for other addicts. Thirty-seven were married, 25 divorced, 16 single, 9 widowed, and 3 were separated. The majority were Caucasian, Protestant, and the highest concentration was from the South Atlantic region. The majority were graduates of three year diploma programs. They gave reasons of physical illness, emotional disturbance, and work pressure for their use of drugs. Primarily, they had obtained their drugs from doctors and hospitals; the drug of choice was Demerol, although other drugs had been used.

Follow-up indicated that 39 of the nurse addicts left the hospital against medical advice, 23 left with maximum hospital benefits, 22 left with a Hospital Treatment Completed discharge, 2 died of overdose after discharge, and 1 died while hospitalized.

Psychological tests administered from 1960 to 1962 to 68 other nurse addicts elicited interesting results. These results were compared with 200 control patients' responses, the control patients coming from the general hospital addict population. Out of the 400 items on the test, there were 184 items on which the nurses

responded differently than the control group. Certain characteristics were more typical of the nurse addict : addiction occurred in adulthood rather than in adolescence, drugs were used for pain or escape rather than for "kicks". The majority of the nurses were from stable homes and had no background of childhood or adolescent problems that would have brought them to the attention of the law. The nurse patients were better educated although less verbal. They tended to be considerably more conventional, and most significantly used denial as a defense in all areas.

CONCLUSIONS

The author concluded her article with two recommendations for those who might supervise or employ nurses who have been hospitalized for drug addiction. Since these nurses have, in the past, reacted poorly to pressure, it is recommended that they be placed in nursing positions where there is little pressure and no demands for overtime work. Also she suggested that, to reduce anxiety for both nurse and employer , the job should not be one that involves the handling of narcotics. Increased understanding on the part of colleagues and employers would enable the nurse addict to have a second chance and to maintain herself in the profession she has chosen and trained for.

Lipp, Martin R., and Benson, Samuel G. Physician use of marijuana, alcohol, and tobacco. American Journal of Psychiatry, 129(5): 612-616, November 1972.

DRUG	Cannabis
SAMPLE SIZE	1,314
SAMPLE TYPE	Occupational (Physicians)
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	February-March 1971
NO. OF REFERENCES	7

SUMMARY

This study, through the use of a questionnaire, sampled the reactions of 1,314 physicians in a cross-sectional study of their personal use and attitudes towards cannabis. Age and geography proved to be the most significant factors involved in attitudes toward, and usage of, marijuana.

METHODOLOGY

In the early months of 1971, 2,652 questionnaires on cannabis were distributed and retrieved by the Department of Survey Research of the AMA. The recipients of the questionnaires were randomly selected

from AMA rosters. Specific geographic areas were used: New York City, upstate New York, Nebraska, and the San Francisco Bay area. Data had already been gathered, using identical research protocol and questionnaires, on medical students at New York University, State University of New York at Buffalo, University of Nebraska, and Stanford University. The researchers intended to compare the data obtained from the physicians with data supplied by the medical students.

All questionnaires were anonymous and were distributed and returned by mail. The confidentiality of the project was stressed. The distribution of the questionnaires was completed in early February 1971, and retrieval of responses was concluded by the end of March 1971. Of the 2,652 questionnaires distributed, 1,314 were returned. Rate of return in the four areas varied from 47% to 53%.

FINDINGS

Thirty-seven percent of those physicians responding to the questionnaire said they had been exposed to the use of cannabis. Approximately 25% had tried the drug at least once, and 7% identified themselves as current users. The study indicated significant differences in cannabis usage associated with age and with geographical area. Generally younger age groups were more likely to have tried marijuana in the past and to be using it currently. The age-use relationship was highly significant in all areas except Nebraska. A high significance ($p > .001$) was found geographically. San Francisco Bay and New York City areas indicated a considerably greater number of users than Nebraska and upstate New York. No significant age-related differences were detected between the two areas of higher use, New York City and San Francisco.

A portion of the questionnaire asked each respondent to indicate which one of a series of statements most closely paralleled his opinion, with regard to the appropriate medical status of cannabis. The results were as follows: "relatively harmless in milder forms" (40%); "research only" (22%); "no human use" (15%); "no opinion" (10%); "relatively harmless"--(should be made available to the public without restriction) (6%); individual use "should be decided by a professionally trained person" (4%); and "no medical considerations" (3%). Seventy-eight physicians took the most permissive stand; of these, 78% had been exposed to marijuana use, 58% had used it, and 24% were currently using it. Two-hundred-one were the most restrictive, and of these, 98% had never used marijuana, and 84% had never been exposed to it. None were current users.

Another section of the questionnaire dealt with the sources that the physicians valued in forming their medical opinions about cannabis. Seventy-three percent placed the greatest value on professional reading, 42% on mass media and nonprofessional reading, and 33% on experience with patients. Among the less valued sources were: recognized authorities (23%), friends and peers (23%), college-age and younger acquaintances (14%), personal experience (12%). The least

valued sources were formal teaching (6%) and laws and court decisions (5%).

When presented with four questions having to do with hypothetical changes in either the legal status or medical opinion regarding cannabis, all groups projected greater usage (compared to current usage) in all four situations. The greatest upward projected changes in cannabis use occurred in the hypothetical situation involving reduced legal sanctions. The study found that some who had never used marijuana predicted they would become users if legal sanctions were considerably relaxed, but most would not. Experimenters indicated considerably more interest in using marijuana in all hypothetical situations. If only aberrant behavior was penalized, a majority of experimenters would have increased their use of cannabis.

CONCLUSIONS

Use of cannabis by physicians most clearly points up the fact that usage cannot be dismissed by terming users stupid and immature, or crazy. There seems to be no demonstrated correlation between doctors' use of cannabis and doctors' intelligence or psychiatric state. Rather, use of cannabis is not only a scientific question, but a cultural issue. Physicians, no more nor less than the general public, are immune to social trends. The medical profession, then, must cease dismissing use of cannabis as the predilection of adolescents and/or patients. If medical authorities fail to persuade practitioners to abstain, convincing the general public seems unlikely.

Jones, Louis E. How 92% beat the dope habit. Bulletin of the Los Angeles County Medical Association, 88: 19, 37-40. April 3, 1958.

DRUG	Opiates
SAMPLE SIZE	130
SAMPLE TYPE	Occupational
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Program/Clinic Statistics
DATE(S) CONDUCTED	1948-57
NO. OF REFERENCES	0

SUMMARY

This article reported the success the California State Board of Medical Examiners has achieved in the task of disciplining and rehabilitating doctors found guilty of narcotics violations.

The California Board has wide discretionary powers relative to the penalty to be imposed after a finding of guilty of a violation of any of the provisions of the Medical Practice Act. In addition to its function of examining, licensing, and disciplining the physicians, the Board undertook the additional responsibility of rehabilitating doctors who were found guilty. A physician who used narcotics or

was addicted might be a person who could be rehabilitated and again become a useful member of the profession if he were not excluded entirely from the practice of medicine for a long period of time. In certain cases, if the temptation of easy access to narcotics was removed and if the doctor could still feel he was of some use to the profession, the chances of rehabilitation would be greatly increased. The Board therefore set a penalty that it believed would produce the best results in relation to the probationer and still protect the public.

The findings of the Board indicated that approximately 92% of the doctors dealt with had not returned to the use of drugs.

METHODOLOGY

If a physician was found guilty in a hearing, the Board revoked his certificate, but stayed the effectiveness of the revocation, and placed the physician on probation for a period of from three to five years with specified terms and conditions. This afforded the Board greater control over the probationer. The probationary terms usually included the surrender of the doctor's Federal Narcotic Stamp, and provided that he not renew or attempt to renew it during the period of probation; that he not have in his possession or use any narcotic drug unless said drug were prescribed for him by a lawfully authorized person; that he conform to and abide by all the federal and state laws and the rules and regulations of the Board; that he report in person to the Board at either one or two of the regular meetings each year during the period of probation; that he file with the Board at quarterly intervals an affidavit to the effect that he has fully and faithfully complied with the terms and conditions of the probation.

The order of the Board further provided that upon full compliance with the terms of the probation period, the licensee should be restored to his full privileges. However, if the doctor violated or failed to comply with any of the terms or conditions during the period of probation, the Board might terminate the probation, cancel the stay of execution and enter an order of revocation.

Additional probationary terms were sometimes included depending on the evidence introduced at the hearing. In certain cases as a condition of probation, it also provided that the doctor cease practice for a specified period of time, or required him to submit to treatment and reappear before the Board prior to again practicing medicine. If the doctor was undergoing treatment, reports at stated intervals from his private physician or psychiatrist were sometimes required.

Beginning in 1956, probationers were required to appear before a 2-member Board committee and privately discuss any problems which they had. This was believed to be a distinct advantage to the probationers in that they were more aware of the Board's desire to assist them; it also permitted Board members to help the probationer with any problems that he might have. In addition, the physicians were required to file affidavits in the Sacramento Office of the Board on a quarterly basis indicating their compliance with the terms and conditions of probation. These factors were believed to have a stabilizing influence on the probationer in calling attention to what was expected of him.

FINDINGS

In a series of 130 cases placed on probation during the period 1948-1957, 41 satisfactorily completed their probation and 62 were still on probation in 1958. In the five-year period from 1948 to 1952, 49 doctors were placed on probation. Of this number 8% had their licenses revoked for again using narcotics prior to the expiration of the probationary period. For the period from 1953-1957, the percentage of licenses revoked because of probationary violation by returning to narcotics was 6.5%.

Board hearings indicated three main causes for the initial use of narcotics:

(1) Overwork and fatigue, usually attributed to the size of the practice and to night calls.

(2) A painful disease, usually chronic in nature, or for pain relief after an operation.

(3) Domestic difficulties or unsolved personal problems.

Findings also indicated that the physicians' patients did not suffer in any way.

CONCLUSIONS

The fact that 92% did not return to the use of narcotics appeared to indicate that placing the licentiate on probation under the terms and conditions does have some merit; that much can be accomplished toward the rehabilitation of the physician providing the terms and conditions of probation and the means and method of guiding the probationer are sufficient.

Smith, Gene M., and Beecher, Henry K. Amphetamine sulfate and athletic performance. Journal of the American Medical Association, 170(5):102-117, May 30, 1959.

DRUG	Amphetamine Sulfate
SAMPLE SIZE	57
SAMPLE TYPE	College Athletes
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Eastern Universities
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires and Check Lists; Athletic Performance Statistics
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	2

SUMMARY

This study was designed to answer the question of whether or not amphetamine sulfate ("pep pills") improves athletic performance in trained athletes. An initial exploratory phase of the investigation yielded data which did not demonstrate conclusively that amphetamine either did or did not help athletic performance, on the average. The measured performance data and subjective data obtained by interviewing the athletes indicated that at least some athletes could obtain consistent and repeatable improvements in performance by taking amphetamine sulfate. This suggestion of improved performance led to a second, and much more extensive, phase of the

investigation, comprised of six separate experiments with almost 800 measured performances of swimmers, runners, and weight throwers.

METHODOLOGY

Six experiments were carried out on swimmers, runners, and weight-throwers to determine whether amphetamine sulfate in the dose of 14 mg. per 70 kg. of body weight improved the measured performance of such athletes. The experiments employed the double-blind procedure, placebos, and additional comparison medications (50 and 100 mg. of secobarbital and 7 and 21 mg. of amphetamine). Eighteen swimmers were studied a total of 453 times, 26 runners gave 205 performances, and 13 weight-throwers gave 123. The medicaments were given orally, and the performances were measured from 2 to 3 hours after the subjects had taken either amphetamine or placebo. The experimental conditions maintained and the methods used to evaluate performance are described in detail in this study. The results of each experiment are evaluated statistically. Data obtained in the exploratory investigation, using a smaller dose level of amphetamine (7 mg. per 70 kg.) are also reported.

FINDINGS

In all 3 classes of athletes, the majority of subjects performed better under influence of amphetamine (14 mg. per 70 kg.) than placebo. The improvement was statistically significant for all 3 classes of athletes. Eighty-five percent of the weight-throwers, 73 percent of the runners, and from 67 to 93 percent of the swimmers performed better under the influence of amphetamine than placebo. The weight-throwers obtained the greatest amount of improvement from amphetamine (from 3 to 4 percent); the runners obtained an improvement of approximately 1.5 percent; the swimmers showed varying degrees of improvement in the various test situations (from 0.59 to 1.16 percent).

CONCLUSIONS

The performance of highly trained athletes, of the classes studied, can be significantly improved in the majority of cases (about 75 percent) by the administration of amphetamine. The relationship of the data obtained to the use of amphetamine in intercollegiate competition was discussed in the light of these findings.

Margaria, R.; Aghemo, P.; and Rovelli, E. The effect of some drugs on the maximal capacity of athletic performance in man. Internationale Zeitschrift für Angewandte Physiologie, 20:281-287, 1964.

DRUG	Multi-Drug; Stimulants
SAMPLE SIZE	3
SAMPLE TYPE	Athletes
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Milano, Italy
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Controlled/Experimental
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	12

SUMMARY

This article consists of a review of the previous research on the relationship of various drugs to athletic performance and the findings of the authors on experiments on this subject.

The authors noted the negative findings, such as that of Segers (1962), concluded that amphetamine causes such a series of unfavorable influences that its use in athletic performance must be considered not only useless but damaging. In 1960 Margaria advanced the hypothesis that the possible utility of amphetamine and similar drugs in sport performances could be interpreted on a purely psychological mechanism,

i.e., the performance of a ceremonial. The experiments of Segers, et al., seem to prove this hypothesis.

Although previous experiments seemed to prove this hypothesis, the authors noted they are only indicative, as one test for every substance was performed in a single subject, and the characters under observation showed a statistical variability sometimes greater than the observed change.

Seeking to remedy this lack of information, the authors carried out a series of determinations to study the possible influence of some of the most popular drugs used by athletes and found no effect on performance for any of them.

METHODOLOGY

Three students, two of whom had little sport activity, the third being a habitual basketball player, ran on a treadmill at a speed of 12 and 13.8 km/h, with a 5% incline. The exercise led to exhaustion in 5 to 10 minutes. The subjects were administered the following dosage of drugs:

Metilamphetamine (Pervitin)--10 mg

Caffeine--100 and 250 mg

Flavon-7-Ethile ossiacetate ("Recordil")--90 and 180 mg

Vitamin C--250 mg

Placebo (Starch)--250 mg.

The observations were limited to four areas: (1) the time of performance, (2) oxygen consumption measured towards the end of the exercise, (3) the maximum heart-rate during exercise, and (4) the blood lactic acid at the end of the exercise.

Before beginning the experiments, the three subjects underwent a period of training in order to reach a more or less steady level of performance. In a double blind, the substances were administered as cachets, 90 minutes before the test.

Five experiments for each drug and each subject were carried out (a total of 30 experiments for each subject). The maximum 0_2 consumption was measured with a closed circuit method. The heart-rate was recorded electrocardiographically at the end of the exercise. The blood samples for lactic acid were drawn before the exercise and respectively 2 and 4 minutes after the end of the exercise, a time necessary to obtain the maximal concentrations: the highest value found was taken as representative of the L.A. production in the organism at the end of the exercise. The enzymatic method, described by Gerken (1960) was used for the analyses.

FINDINGS AND CONCLUSIONS

The data collected gave no indication that the drugs tested may increase the maximum capacity of athletic performance, in the doses given, and for the type of exercise of the present tests. Particularly, the maximum oxygen consumption and the time of performance, the two most indicative parameters to evidence an improvement in performance, do not seem to be affected by any of the drugs tested.

Only the blood lactic acid at the end of the exercise seemed to be significantly reduced after the administration of 250 mg caffeine but this was not considered strictly indicative.

Karpovich, Peter V. Effect of amphetamine sulfate on athletic performance. Journal of the American Medical Association, 170 (5):118-121, May 30, 1959.

DRUG	Stimulants
SAMPLE SIZE	54
SAMPLE TYPE	Students
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Observations, Laboratory/Examination
DATE(S) CONDUCTED	1958-1959
NO. OF REFERENCES	9

SUMMARY

The study investigated the effect of amphetamines, known to cause euphoria and various degrees of insomnia, on endurance or speed in athletic activities. Statistical analysis of 532 tests showed neither beneficial nor deleterious effects of 10 or 20 mg. of amphetamine on all but 4 subjects. Three of the subjects benefited from the amphetamine, and one man was affected deleteriously. All had received 20 mg. of amphetamine.

METHODOLOGY

The study was designed to detect the effect of the drug on endurance, recuperative ability, and speed of athletic performance under two conditions: "laboratory" conditions, and under emotional stress during actual athletic competition. Fifty-four male college students were tested as follows: 25 on the treadmill, 18 in swimming, and 11 in track time trials during competition. All subjects had a medical examination. Blood pressure and pulse rate were taken one-half hour and one hour after medication, but discontinued when no particular variations were observed. The following activities were tested : (1) running to exhaustion on an electrically driven treadmill at 7.2 mph and 5-degree inclination twice in succession with a 10-minute rest between the runs, (2) swimming 100 yards as fast as possible twice in succession with a 10-minute rest between swims, (3) swimming 220 and 440 yards once on each testing day, (4) running 220 yards on an outdoor track for time trials, and (5) running various distances (from 100 yards to 2 miles) during competition. Altogether 532 tests were used for statistical analysis. Laboratory experiments consisted of 6 tests done on 6 different days, 3 times with the drug and 3 times with a placebo. Experiments during actual contests were planned so that each subject would run from 4 to 8 times, one-half of the runs with amphetamine and one-half without.

In the first series, 4 subjects received 20 mg. of amphetamine 30 minutes before the test. The remaining subjects received 10 mg. one hour before the test. The drug and the placebo (calcium lactate) were administered from coded bottles and given to subjects in rotating order. Test administrators did not know the code.

In the second series all subjects received 20 mg. of amphetamine or placebo 30 minutes before the test. One tester knew the code so that individuals who were affected either beneficially or deleteriously by the drug could be subjected to additional tests.

FINDINGS

Treadmill Runs

Tests with 10 mg. of amphetamine given to 11 subjects and 20 mg. to 10 subjects 1 1/2 hours before the run showed no evidence of either a beneficial or deleterious effect of the drug on endurance or recuperation from fatigue. Analysis of variance of times between the runs with the drug and with the placebo showed no statistically significant differences. Four men, highly interested in the experiment and

therefore highly motivated to do their utmost, were each tested 7 times. Most of the subjects felt a sense of euphoria after taking 20 mg. of amphetamine, the effect being noticeable about 30 minutes after taking the capsule. They also thought they could run longer when they felt this effect. One subject performed better on placebo than on amphetamine.

Swimming

No statistically significant differences were found between amphetamine and placebo performance for the following swimming tests: (1) 10 mg. given to 11 subjects one hour before swimming 200 yards, (2) 20 mg. given 30 minutes befor swimming 220 yards, and (3) 20 mg. given 30 minutes before swimming 440 yards. Two swimmers showed an increased speed in swimming 220 yards with 20 mg. of amphetamine given 1/2 hour before the test. One subject achieved his two fastest times with the drug after the swimming season was over and he was not at the peak of condition. The effect of amphetamine was observed each time he took the drug. A second subject also swam faster each time he took amphetamine. A third subject swam the 440 yards faster each time with amphetamine than with placebo, but his swimming time for 220 yards was not affected.

Track Running

Nine varsity men were tested 6 times after taking 10 mg. of amphetamine 1 hour before time trials for 220 yard runs. Analysis of variance between runs after taking amphetamine and placebo showed that there was no statistically significant difference between the times.

Competitive Track Runs

Twelve men made 65 runs in 7 events: 100 yard, 220 yard, 220 yard with low hurdles, 440 yard, 1/2 mile, 1 mile, and 2 miles. The best time was made 11 times with the drug and only 9 times with the placebo. There were two ties. Some runners showed a consistent improvement in speed and some a consistent deterioration in performance regardless of the chemical taken. On one occasion, a subject improved his endurance a record 88% after taking 10 mg. of amphetamine and another subject increased his speed 132%, a record not repeated when given the drug 2 other times. The second subject could offer no acceptable explanation of his phenomenal run. This

raised the suspicion that the runners were not always running to the limit of their ability. However, there was no other tangible evidence on which to suspect these two subjects.

Subjective Reports

When asked to report any unusual sensations or effect on sleep with 10 mg. of amphetamine, the placebo was blamed or praised as often as the drug. When 20 mg. was given, the subjects were 75% correct in guessing when they had been given the "pep pills." On one occasion when the trackmen did exceptionally well, they begged for more of the "miracle pills." Subsequent examination of the records revealed that some of these "miracle pills" were placebos.

CONCLUSIONS

All reports regarding the ergogenic action of chemicals obtained from studies of single individuals or small groups should be regarded with extreme caution. It is also advisable to plot performance graphs for each subject, so that any unusual reaction can be discovered immediately and followed up with additional tests.

Fowler, W. M. The facts about ergogenic aids and sports performance. Journal of Health, Physical Education and Recreation, 40: 37-42, November-December, 1969. (57 references).

SUMMARY

Ergogenic aids are defined as aids which increase the capacity of bodily and mental effort, especially by eliminating fatigue symptoms. Findings from a literature review are surveyed regarding nutritional (proteins and carbohydrates, vitamins, minerals), physical (oxygen, massage), and pharmacological agents (central nervous system depressants and stimulants, drugs, androgenic-anabolic steroids). The literature surveyed led to the conclusion that there are no pharmacological ergogenic aids which can be safely used.

In this study nutritional ergogenic aids are regarded as specific foods, vitamins, and inorganic substances added as supplements to a normal well-balanced diet in healthy individuals. Since there is an increased utilization of carbohydrates during strenuous activity the use of sugar as an ergogenic aid is logical, but during brief periods of very strenuous exercise muscular efficiency is dependent upon energy reserves and training. Since most vitamins cannot be stored and any over-supply is rapidly excreted, vitamin supplements to a well-balanced diet are expensive placebos. Other nutritional supplements such as potassium, calcium, magnesium, and phosphorus have been studied as to their effect on sports performance. No significant effect has been shown. Sodium chloride was found to be useful as a precautionary measure to prevent heat cramps and hyperpyrexia.

Conflicting findings are reported on the use of physical and mechanical ergogenic aids such as oxygen, massage, mechanical devices and ultraviolet light. For the most part exaggerated claims have been made for techniques that might be beneficial if used in moderation.

Pharmacological ergogenic aids are defined as any chemical agent which affects living protoplasm. Caffeine, camphor, cocaine, coramine, strychnine, metrazol and amphetamine have all reportedly been used as ergogenic aids and may be classified as central nervous system stimulants. Several studies have shown that cocaine increases endurance and the speed of recovery after bicycle riding. Caffeine has been shown to increase work output but does

not affect speed in running short distances. No controlled work studies using coramine or metrazol were found. Reports on amphetamine are conflicting. One study found that amphetamine improved performance in a variety of athletic events, tests of strength, and psychomotor and mental performance; other studies have found no effect on performance. Epinephrine has been shown to make subjects feel more energetic but has failed to produce an increase in work capacity. Cardiovascular drugs have been widely used as ergogenic aids, especially in cyclists, but few controlled studies were found regarding their effect on work performance in normal subjects. The effect of androgenic-anabolic steroids has been shown to be age dependent (more effective after age 50), time and dose dependent. Several well-controlled studies have produced conflicting evidence as to their effect on strength and performance.

Of all the nutritional and physiological ergogenic aids, only carbohydrates have any physiological effect on performance. There are no pharmacological ergogenic aids which can be safely used. The author recommends that the use of ergogenic aids in sports, whether done unknowingly, tacitly, secretly, or openly should be unequivocally condemned.

Golding, Lawrence A., and Barnard, James R. The effect of d-amphetamine sulfate on physical performance. Journal of Sports Medicine and Physical Fitness, 3(4):221-224, December, 1963.

DRUG	Stimulants
SAMPLE SIZE	20
SAMPLE TYPE	Students
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

SUMMARY

The effects of d-amphetamine sulfate on all-out treadmill running were tested with 10 conditioned and 10 unconditioned subjects. They were given 15 mg. of d-amphetamine sulfate or a placebo (lactose) 2 to 3 hours before the tests. Effects of the drug in rested and fatigued states were analyzed on both classes of subjects. The drug produced some changes in heart rate and blood pressure but did not significantly affect respiration or blood glucose.

METHODOLOGY

For this investigation 15 mg. of d-amphetamine sulfate were administered and lactose was used as a placebo. Twenty subjects were selected: 10 conditioned athletes, members of the university track team, and 10 unconditioned university students. They ranged in age from 18-25. During the experiment the treadmill was operated at 10 mph at an 8.5% grade. Capsules were administered 2-3 hours before the treadmill ran. After a rest, heart rate, blood pressure and respiration were recorded. Blood was taken for glucose determination. After running the treadmill to exhaustion, the subject was placed on a bed; heart, blood pressure and respiration were checked every minute for a 10-minute period. After 11 minutes the subject returned to the treadmill.

Each conditioned subject was asked to perform his test 6 times; 3 with the drug, 3 with the placebo. At least 1 day of rest was allowed between each test. Unconditioned subjects were asked to perform the test 2 times; once with the drug, once with the placebo. These subjects were given a week to rest between tests.

FINDINGS

T-values for the differences between the mean drug and mean placebo times showed that d-amphetamine sulfate had no significant effect on all-out treadmill runs performed in rested or fatigued states by conditioned or unconditioned subjects. In a resting state the drug significantly increased heart rate and blcod pressure but had no effect on respiration rate. The recovery rate for blood pressure after rested runs was retarded but had no significant effect on heart rate or respiration. After fatigued runs, recovery rates for heart rate and blood pressure were retarded, respiration was unaffected. D-amphetamine sulfate had no significant effect on blood glucose.

McGuire, Terence F.; and Leary, Frank J. Problems resulting from the use of habituating drugs in industry. III. Tranquilizing drugs and stress tolerance. American Journal of Public Health, 48(5):578-584, May 1958.

DRUG	Tranquilizers
SAMPLE SIZE	10
SAMPLE TYPE	Occupational (Airmen)
AGE	Adults
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	1956-1957
NO. OF REFERENCES	18

SUMMARY

This study attempted to evaluate the effect of tranquilizing drugs on human subjects under stress. The research was begun when it became apparent that a number of pilots were receiving tranquilizing drugs to relieve anxiety.

Ten healthy male subjects, aged 18 to 27 were subjected to stress tolerance tests both in their normal state and while on therapeutic doses of tranquilizers.

Stress tolerance was reduced while on tranquilizers. Increasing doses yielded even more severe limitations.

The authors felt that if airmen are in a situation where a tranquilizer is needed, they should come off flying status while on the drug.

METHODOLOGY

The authors set up a panel of 10 healthy young men aged 18-27. After complete physical exams, the men were exposed to a series of five stresses, some very mild and others quite demanding. They were then placed on the currently recommended therapeutic doses of either a placebo, chlorpromazine hydrochloride or meprobamate; some subjects eventually received all three. The subjects were not told what they were receiving or what the investigation was attempting to discern.

They were given five tests: (1) Valsalva Overshoot, (2) Continuous Positive Pressure Breathing, (3) Tilt Table, (4) Harvard Step Test, (5) Classified Test. No more than two tests were performed on any given day, and these two were performed on any one subject at widely separated times, so that his stress response to one test might not be prejudiced by the prior test.

The response to each of the tests used was graded on a 1 to 5 basis; one was a very poor response, while a score of 5 indicated an excellent response to that particular stress.

FINDINGS

On the five tests, the effects of chlorpromazine hydrochloride on reducing stress tolerance were seen much earlier than those of the less disruptive meprobamate. But as the stress became more pronounced, the limitation imposed by the meprobamate became marked, producing a serious shortcoming in stress tolerance.

A series of additonal tests, using higher doses of various tranquilizers, universally decimated the subjects' abilities to compensate for stress of any magnitude.

Economy cuts and problems of a more pressing nature forced abandonment of the program before completion.

CONCLUSION

The authors concluded that flying personnel in a flying situation should not be given tranquilizers. They see several dangers: the reduction in the capacity to compensate for stress, side-effects of meprobamates, and a reduction in capacity to realize and appreciate risk in a potentially dangerous situation, an important step in using caution and good judgment.

The authors strongly recommend that airmen not fly while on tranquilizers.

Hauty, G. T.; and Payne, Robert B. Problems resulting from the use of habituating drugs in industry. II. Effects of analeptic and depressant drugs upon psychological behavior. American Journal of Public Health, 48(5):571-577, May 1958.

DRUG	Stimulants
SAMPLE SIZE	Not Specified
SAMPLE TYPE	Military
AGE	Not Specified
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Not Specified
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	0

SUMMARY

The purpose of the investigation was to determine how the proficiency with which aircrews perform their jobs is likely to be affected by various commonly used stimulants. The experimental population consisted of normal, healthy, male subjects. The authors were concerned with fatigue and proficiency decrement, an important problem because of the possibilities and complexities of long-range flights.

The subjects were assigned a variety of exacting tasks. Following this they received randomly assigned pharmacological treatment, in

standard dosage; they were then immediately returned to a prolonged period of work.

Dexedrine was selected for extensive investigation. It was found that a standard dosage of dexedrine acted to offset the loss of proficiency from prolonged work. There were no undesirable effects that could be attributed to dexedrine.

METHODOLOGY

Subjects received practice at a task which required them to manipulate simulated aircraft controls, so as to maintain concurrently all indicators within their respective limits of tolerated error.

They were then given standard dosage of drugs and returned to the previous task.

Other tests were run using 1/2 placebo and 1/2 dexedrine, with the subjects performing the same task while breathing varying amounts of a nitrogen-oxygen mixture.

Subjects were then assigned the same task for 30 hours of consecutive work. One group was given a placebo and the other two groups received varying quantities of dexedrine.

A later investigation to explore the effects of dexedrine upon frustration threshold was specifically designed to assess the effects of this preparation upon the behavior of two-member teams working under certain conditions.

The two authors also investigated the side effects of drugs that are currently used for the prevention of motion sickness. These drugs were administered to a large population of Air Force personnel. The subjects then underwent tests which dealt with abilities and skills relevant to the performance of the different aircrew duties.

FINDINGS

It was found that a standard dosage of dexedrine acted to offset the loss of proficiency from prolonged work. There were no undesirable effects that could be attributed to dexedrine. It was found that there was little likelihood of dexedrine, administered in standard dosage, inducing extremes in emotional and attitudinal behavior.

The studies of drugs generally used for motion sickness (antihistimine and anticholinergic) produced findings in accord with the literature dealing with other depressant agents. The most pronounced adverse effects were evidenced in tests involving the higher intellectual processes.

CONCLUSIONS

The authors concluded that dexedrine could be used under certain circumstances with normal healthy males to increase efficiency without causing adverse effects.

The authors found a discrepancy between obtained findings and popular opinion. They called for more extensive systematic investigation to determine the behavioral effects of drugs.

III. SURVEYS OF DRUG USE IN COMPANIES

Johnston, R. G. A Study of Drug Abuse Among Employees in Akron, Ohio. Akron, Ohio: Bureau of Business and Economic Research, University of Akron, 1971. 56 pp.

DRUG	Multi-Drug
SAMPLE SIZE	134 Companies
SAMPLE TYPE	Occupational
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Akron, Ohio
METHODOLOGY	Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1970
NO. OF REFERENCES	3

SUMMARY

A survey was conducted among business concerns in Akron, Ohio, to learn what effect, if any, the drug abuse problem had on their business operations. Questionnaires were sent to 305 companies; 134 (44%) were returned. Based on ten criteria drawn up to differentiate companies with employee drug problems from companies with no employee drug problem, 31 were identified as having some sort of drug abuse problem among their employees. Manufacturing firms and firms with more than 100 employees were found to have a greater problem. The majority of all firms replied that alcohol is still a greater employee problem than drug abuse. A large number of firms were using screening

and detection measures as pre-employment requirements; very few used follow-up measures once employees were hired. The findings of the survey are presented in detail, by type of company, and for all companies. The author concludes that drug abuse is a problem among Akron area businesses but not one of major concern.

METHODOLOGY

Business firms were designated as falling within one of the following 4 groups:

Group I - Manufacturing firms employing 100 or more persons

Group II - Manufacturing firms employing fewer than 100 persons

Group III - Non-manufacturing firms employing 100 or more persons.

Group IV - Non-manufacturing firms employing fewer than 100 persons.

The sampling method was different for each group:

Group I - Questionnaires mailed to all 69 firms listed by Akron Area Chamber of Commerce; 57% return

Group II - Questionnaires mailed to all 133 firms listed by Chamber of Commerce; 37% return.

Group III - Questionnaires mailed to 43 firms selected from Chamber of Commerce directory; 47% return

Group IV - Questionnaires mailed to 60 firms, a 5% random sample selected from the Chamber of Commerce directory; 43% return.

Criteria were drawn up to differentiate between companies; it was decided that a company had to meet one of ten conditions before it was considered a problem company for the purposes of the study. Companies had to report one of the following:

1. Actual identification of employee drug abuse as a problem
2. A union representing employees had to identify drug abuse as a problem within a firm
3. A positive percentage increase in drug abuse incidence among employees since January 1968

4. Reported cases of drug abuse by employees while on company premises or while conducting business off the premises

5. On-the-job accidents which were the direct result of employees' actions while under the influence of drugs

6. Increased operating costs attributed to employee drug abuse

7. Employees released due to drug abuse between 1968 and 1970

8. Increased costs of company-provided medical and group insurance benefits attributed to the incidence of employee drug abuse

9. Overtime paid out as a result of employee absences due to drug abuse since January 1968

10. A written comment to the effect that the company had experienced some employee drug abuse problem.

Due to the non-uniform sampling technique and the disproportionate percentage of returns from each group, no cross-group comparisons were attempted. However, comparisons are given of responses of problem companies within each group to those of non-problem companies and results are presented both by group and all groups combined. The questionnaire is included in the appendix to the report.

FINDINGS

Responses applicable to both problem and non-problem firms; all groups combined:

- Maintain formal or informal records of the incidence of drug abuse among employees
  11%--10 problem companies, 5 non-problem companies.

- Use pre-employment screening procedures
  36%--22 problem companies, 26 non-problem companies

- Require pre-employment physical examinations
  46%--21 problem companies, 41 non-problem companies.

- Conduct follow-up examinations to detect drug abuse among employees
  5%--4 problem firms, 2 non-problem firms

- Offer special drug control training to plant security personnel (used by 50% of all firms surveyed)
  9%--6 problem firms

- Management instructed to watch for drug abuse
  46%--22 problem firms, 40 non-problem firms.

- Contribute to drug abuse information programs
  20%--8 problem companies, 12 non-problem companies.

Responses indicative of employee drug abuse problem; all groups combined:

- Drug abuse identified as an employee problem
  9% of all respondents

- Cases of employee drug abuse while on company premises
  11% of all respondents

- On-the-job accidents attributed to drug abuse
  3% of all respondents--4 problem firms.

- A total of 48 employees released by 9% of all companies between 1968-1970

- Total turnover cost due to drug abuse between 1968-1970 was about $24,000

- Increased costs of medical and group insurance benefits
  2% of all respondents.

Responses applicable to problem firms; all groups combined:

- Discharge employee if specific case of drug abuse found.
  7--would immediately discharge
  19--would not discharge
  3--depends on circumstances.

- Permit employee to remain on job after specific case of drug abuse found
  17--remain on job until proven that drug use adversely affected job performance
  8--would not permit employee to remain.
  3--depends on circumstances

- Eleven firms refer drug-using employees to outside agencies

- Age was seen as a factor in drug abuse by 8 companies

- Higher incidence of drug use was reported in employees under 30 years of age

- Drug abuse is more of a problem among blue-collar than white-collar workers.

- Comparison of alcohol with drug abuse
  28--alcohol is a greater problem
  1--drug abuse is currently a greater problem.

- Seventeen firms said drug abusing employees are less dependable than non-drug abusing employees.

CONCLUSIONS

The author concludes that drug abuse is a problem among employees of Akron area businesses, although compared with reports from other areas, it is not of major concern. It was found that firms with more than 100 employees tended to have more employee drug abuse problems. Manufacturing companies released by far a larger number of employees for drug abuse than non-manufacturing firms (39 versus 9). The author's expectation that more problems would be found in companies with employees with recent military experience was not borne out.

The author feels that there is much more employee drug abuse than was reported but that companies have no proof. A larger percentage of problem firms were using detection methods and preventive and remedial measures.

Respondents were asked to indicate how American businesses actually contribute to the drug problem. Replies were realistic and objective and recognized the fallacy of treating symptoms rather than the problem.

Respondents were also asked what companies can do to help solve the drug abuse problem. Suggestions ranged from conducting Bible seminars to firing all known and suspected drug users. The author suggests a large number of additional measures and emphasizes the importance of rehabilitation efforts.

The author concludes that the drug abuse problem can only be eliminated by following the six-step procedure outlined below:

1. Realizing that a drug abuse problem exists.
2. Realizing that it is a symptom of much more basic problems.
3. Acquiring a working knowledge of drugs and their use.
4. Identifying the underlying causes of drug abuse.
5. Eliminating all possible causes of drug abuse.
6. Rehabilitating drug abusers.

Rush, Harold M. F. and Brown, James K. The drug problem in business; a survey of business opinion and experience. The Conference Board Record, 6-15, March 1971.

DRUG	Multi-Drug
SAMPLE SIZE	222 firms
SAMPLE TYPE	Occupational
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Cross-Sectional
METHODOLOGY	Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1970
NO. OF REFERENCES	0

SUMMARY

A survey of 222 firms throughout the country was undertaken by the Conference Board Record to identify:

1. the nature and extent of the drug problem in business as perceived by management;

2. company experience with employees using or abusing drugs;

3. implications for corporate policy and practice with regard to drug abuse;

4. company involvement in community drug addiction education, treatment, and rehabilitation programs; and

5. company posture on drug abuse and law enforcement.

The survey indicated that although most companies have had limited or no experience with drug abuse, most believed it is or will be a major problem. Of those companies reporting drug problems, most reported only minor instances. The most frequently cited problem was absenteeism. Few companies had formal policies for dealing with employees using drugs. Few companies were directly involved in community drug programs. Company opinion was about evenly divided when asked whether users should be referred to law enforcement agencies, should not be referred, or each case should be decided individually.

METHODOLOGY

A survey was made of management in 222 firms--131 manufacturing companies and 91 nonmanufacturing companies--to gather information concerning drug problems and programs. The manufacturing firms were members of the panel that participates in the Conference Board's quarterly Survey of Business Opinion and Experience. A sample of nonmanufacturing firms was drawn to complement and broaden the responses.

FINDINGS

1. Nearly two-thirds of the 222 companies in the sample either saw drug abuse as a major problem in business now or anticipated it as one that management will have to face. Slightly more than one-fourth of the sample did not know whether drug abuse was a general problem in industry.

2. Nearly 40% of the sample stated that there was no drug problem in their organizations, 9% did not know and 53% were aware of a drug problem. Of those aware of a problem, most reported only "minor instances."

Several of those reporting no drug problem claimed to have avoided it by rigid pre-employment physical examinations or by stringent security and background investigations. Most firms which felt presently free of a drug problem anticipated one in the future.

Of those companies reporting awareness of a drug problem (117), 15% specified that "hard" drugs have been involved almost exclusively, 35% recounted problems primarily with "soft" drugs, and 50% reported problems with a variety of drugs.

In general, survey participants reported taking a soft line on "soft" drugs unless their use interfered with employee productivity.

The most commonly cited management problem stemming from employees' drug use was absenteeism, cited by 41% of the 90 firms which mentioned problems. Other problems cited were turnover, decreased productivity, theft, and interpersonal or morale problems.

3. Thirty-six percent of the total sample replied "don't know or insufficient experience" when asked what action they take if they learn that an employee is using drugs. Thirty-five percent provided or referred employees to medical treatment or counseling. Twenty-two percent discharged employees. When employees were discharged, short-term employees were more apt to be discharged than long-term employees. Dismissal was more often reported by nonmanufacturing firms (i.e., financial institutions, retail establishments, utilities, transportation companies) than manufacturing firms.

   Relatively few (18) companies had written, formal policies delineating company position on drug abuse and drug abusers. Seventy-two companies, however, had issued instructions to supervisors on how to spot drug users or how to treat employees found or suspected of using drugs.

4. Only 16 companies donated money directly to community programs of drug education, treatment and rehabilitation. Seventeen companies participated in community programs and two others lent professional personnel to drug abuse rehabilitation programs. Reasons cited for such support included employees with drug problems and employees' children with drug problems. One hundred companies reported contributing indirectly to community programs through United Fund and other organizations.

5. When asked their opinion about referring employee drug users to law enforcement agencies, 27% of the sample favored referring all users, 25% did not, and 28% favored deciding each case individually. Twelve percent favored referring pushers/sellers only and 8% did not know or had no experience.

CONCLUSIONS

Most of the companies have had limited or no experience in dealing with drug abuse but a majority of these believed it is an increasing phenomenon. Size of the company made little difference in the extent of the drug problem, nor did geographic/regional location. The incidence of reported drug abuse within their own companies was almost the same for nonmanufacturers and manufacturers. Nonmanufacturing firms were more apt to fire an

employee for drug abuse, but manufacturers were a little more likely to feel obliged to refer drug users to law enforcement agencies. More nonmanufacturing firms than manufacturing firms had written policies or procedures for dealing with drug abuse. Although many different drugs were used by employees, "soft" drugs were most common. Relatively few companies contributed directly to community drug education, treatment or rehabilitation programs.

Rogg, Sanford G.; and Pell, Sidney. Use of psychotropic drugs by employed persons. Industrial Medicine and Surgery, 32, July 1963.

DRUG	Depressants; Stimulants
SAMPLE SIZE	3,042 (Additional Study--3,104)
SAMPLE TYPE	Occupational
AGE	Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Wilmington, Delaware
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1961
NO. OF REFERENCES	None

SUMMARY

A survey was conducted of 3,042 employees of du Pont Co. to determine what proportion used psychotropic drugs and why. Approximately 25% of these white-collar employees had used such drugs during a 12-month period. Results showed that drug use increased with age; drug use was higher among women at all ages; nervousness, insomnia, unexplained tension, gastro-intestinal disorders and hypertension were the reasons most often given for use; approximately 50% had taken the drugs for less than 1 month; 8% considered the drugs beneficial; alcohol consumption also increased with age and was greater among those with free-floating anxiety than those with psychosomatic conditions. In a separate

survey, the proportion of 3,104 male production workers using drugs was found to be less than among white-collar workers.

METHODOLOGY

Anonymous questionnaires on the use of psychotropic drugs were administered to 3,024 employees of E.I. du Pont de Nemours and Co. in Wilmington, Delaware at their scheduled physical examination during 1961. The sample consisted of white-collar workers ranging from mail boy to higher executives. Information sought included department, sex, and age of subject, kind of drugs taken, length of time drug taken, condition for which taken, benefit from drug, and whether alcohol was also taken. The medications used included tranquilizers, barbiturates, and psychic energizers. The study did not examine the validity of prescriptions for the various drugs. A comparative study surveyed 3,104 male production workers of a large manufacturing plant in a semi-rural area.

FINDINGS

Approximately 25% of the employees had used drugs during 1961. Use increased with increasing age and was higher among women than men. Among employees under age 25, no males, but 21.3% of the females were users. Sixty percent used drugs for nervousness, unexplained tension, and insomnia. Among these users, for nervousness, 29.3% were women, 14.4% men; for hypertension, 6.4% were women, 18% were men. The authors hypothesized that these results reflect the fact that women are expected to express emotions directly while men must camouflage them psychosomatically. Thus, more men used drugs for hypertension while more women used drugs for depression. The authors speculate that single women, or those who work from necessity despite home duties, are liable to depression.

Only 5% of the subjects aged 25-34 took drugs for hypertension but this increased steadily to 8% for the age range 55-64. Drugs taken for nervousness due to job problems, unexplained tensions and gastrointestinal disorders were highest at ages 35-44. Nervousness due to family problems peaked at 3.5% at ages 45-54. Only half of the subjects had used drugs for over a month. Both tranquilizers and barbiturates were used for periods longer than a month.

The drugs were believed effective by 79.2% of the users. Tranquilizers were claimed as somewhat less beneficial than other psychotropic drugs.

In the comparative study of blue-collar workers, 16.4% (as opposed to the 21.8% of white-collar workers) used psychotropic drugs.

CONCLUSIONS

The authors state that the reason for the differences between drug use by blue vs. white-collar workers could not be attributed to greater physical activity of production workers due to lack of information.

Goldenberg, Ira. Employment and Addiction: Perspectives on Existing Business and Treatment Practices; Final Report of a Research and Development Project Under Department of Labor Grant. No. 92-25-71-05, Cambridge, Mass: Harvard University, August 1972. 175 pp.

DRUG	Multi-Drug
SAMPLE SIZE	Employers: 18 Drug Users: 60 Drug Programs: 20
SAMPLE TYPE	Volunteer Treatment (outpatient) Treatment (inpatient)
AGE	16-21 (Drug Users)
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Boston Metropolitan Area, Massachusetts
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews Questionnaires
DATE(S) CONDUCTED	June 1971 - June 1972
NO. OF REFERENCES	132

SUMMARY

The overall purpose of this study was to assess and analyze existing business practices concerning drug use by employees and related employer relationships with manpower and drug addiction control agencies, as a means of developing potential models for coordinated employer-manpower development-drug rehabilitation activities aimed at enhancing the employment stability of drug users and ex-users.

In addressing this goal, a survey was undertaken of the practices of both employers and drug treatment programs with respect to the

employment needs of drug users and ex-users. It was found that both drug programs and employers are largely uninvolved in the employment needs of drug users and ex-users, and that presently there are no viable operating examples of models through which these needs are being met in the Greater Boston Area.

In addition, through a questionnaire developed for and administered to drug program personnel, employers,and drug users and ex-users, information was gathered and presented concerning the varying perceptions of each of these groups with respect to the problem of drug use in general, and the issues involved in employing and/or training drug users and ex-users in particular. While all three groups surveyed (i.e., drug program personnel, employers and users and ex-users) tended to feel that drug rehabilitation programs should help clients get jobs and that better job opportunities would help, in practice drug programs do not see vocational training or job placement as playing an important role in the "rehabilitative" process, while employers are actively excluding people with a history of drug problems from the labor force in the belief that these people constitute bad business risks and endanger the productivity of the company.

In a separate but related section, the attempt is made to provide the Department of Labor with a comprehensive review of the literature bearing on issues of the employment, rehabilitation and training of drug users and ex-users. Literature was reviewed systematically according to its source, with special note being made of concurrences and differences of reported fact and opinion. The review of the literature includes a thorough discussion of the nature and effects of abused drugs, theories concerning the etiology of drug abuse, and a comprehensive examination of drug rehabilitation programs and methods and employment practices in the area of drug abuse as reported in the literature.

Finally, the attempt is made to outline potential models for improving the current situation. These include increased management participation and drug re-education, the communication and coordination of existing resources, a model patterned after the National Alliance of Businessmen, providing drug programs with manpower resources, and finally, the involvement of the Department of Labor in a leadership role in terms of planning and implementing new kinds of jobs and training programs to meet the needs of the future. In conjunction with this, selected areas of research are suggested for future follow-up.

METHODOLOGY

An initial telephone survey was made of all drug treatment facilities in Massachusetts and of 100 employers in the Greater Boston area, to assess the extent to which the "world of work" was currently utilized in rehabilitation efforts. Treatment facilities were asked

three questions concerning the range of services provided, the importance of programs helping enrollees find jobs, and how much of programs' efforts were spent at this. Employers were asked if they had experienced drug problems, their policy concerning addict hiring, and their relationships with drug programs.

A final questionnaire was administered to selected drug programs, employers and drug users. Twenty programs were randomly selected within the Greater Boston area; ten engaged in employment and vocational training and ten that were not. Sixty drug users were randomly selected from these 20 programs, three from each. Eighteen employers were randomly selected, representing four size categories.

FINDINGS

Telephone Survey

Of 152 operating drug rehabilitation facilities responding, only 15% were engaged in activities in which employment and manpower resources were utilized in the rehabilitative process. Of the 100 employers, only 2% had made efforts to hire addicts or established a relationship with a rehabilitative program. Eighty-five per cent reported never having had an employee drug problem.

Intensive Interviews

Drug Users

Data from the sixty addicts and/or ex-addicts interviewed revealed that the typical drug user was between 16 and 21 years of age. He began using drugs prior to age 16, when he was in school or employed. He is a high school drop out. He has a marketable skill. Most likely, his initial drug use was prompted by experimentation. He believes that most people become drug users in order to escape from a negative life situation or because of social norms. Opiates are his most commonly used drug, but not to the exclusion of others. His decision to enter a drug program was his own and he has probably been involved in more than one. His major source of information concerning drugs is the media, yet he views it as highly unreliable.

He is unemployed. He thinks that more meaningful job opportunities would help solve the drug problem and feels that drug programs should help users get jobs. He does not know of any employers who make special efforts to hire drug users and believes that employers use specialized techniques to weed-out drug users.

Drug Programs

The 20 programs in the sample represented four different kinds of drug settings: traditional medical; traditional non-medical; totally

controlled environments; and non-traditional, non-medical.

The typical drug program sees the drug user as having become involved with drugs because of peer pressure, rather than experimentation or negative life situation. Also unlike the drug users, drug programs view users as usually involved with only one drug program. The drug program sees external social reasons as militating against the possibilities of dealing effectively with the drug problem. Contrary to what is actually the case, a plurality believe the drug user has no marketable skill.

The typical program firmly believes that better job opportunities are a lever to solving the drug problem. Contrary to the perceptions and experiences of the drug user, the program sees itself as using a client's previous job history in the helping process but believes counseling or therapeutically-oriented treatment is the answer to the drug problem. The program does not know of employers who are willing to hire users or ex-users and believes that employers actively seek to weed-out drug users.

Employers

Twenty employers were interviewed. They represented both small and huge businesses and both service and product-oriented businesses.

The typical employer has never had any personal contact with a drug user and gets almost all of his information from mass media. He sees "friends" as first exposing people to drugs. He is divided as to whether social norms or excape from a negative life situation account for the drug problem. External social reasons are among the influencing factors leading to drug use, in his opinion.

The employer acknowledges that society wouldn't change its view of the addict even if he completed treatment.

His estimate of the number of drug users who are unemployed is close to the 87% figure reported by drug users. He sees drug users as having a marketable skill.

The employer is divided as to whether better job opportunities would help solve the drug problem. While he thinks programs should help drug users get jobs, he does not know of any special efforts within industry itself and believes that employers seek to weed out users.

CONCLUSIONS

Society's view of the drug user, according to the three groups surveyed, is non-specifically negative. The three groups also concurred that society would not view the rehabilitated user differently. Employers and drug programs were also in strong agreement that

users do not enter drug programs because of lack of desire, reinforcing a widespread perception of the user as a personally deficient human being. Since 55% of the employers had never had personal contact with drug users, it appears that secondary sources of information contribute largely to employers' perceptions about drug users. The mass media was the main informational source about drugs for all three groups and was cited by 82% of the employers. The literature review carried out as part of the study indicated that much mass information directed to business and the general public is frequently unreliable, yet employers felt that mass media was a highly reliable source.

Drug users themselves have apparently internalized society's view of the "addict" as an incurable social deviant. When asked to self-describe themselves as drug user, drug abuser, drug addict, or other, most chose addict.

Almost three-fourths of the drug users began to use drugs at an age when they were legally too young to work, yet most of them dropped out of school. Their employment status turned out to be poor; 87% were unemployed. Yet 60% had a marketable skill, a skill acquired by 52% after becoming involved with drugs. Employers' perceptions of users and skills, however, showed that only 2% acquired skills after involvement with drugs.

Thirty-four per cent of the users not presently employed expressed little desire for a job, suggesting that the worldofwork is not a relevant area of concern to them.

While all three groups favored drug programs helping clients get jobs, only 45% of employers felt that better job opportunities would help solve the drug problem. In addition, when asked an open-ended question about what should be done about the drug problem, none of the three groups responded with suggestions relating to the world of work. Interviews with drug programs showed that very little vocational services were performed.

Further interview data with employers confirmed conclusions derived from the project literature review: that employers are making no positive contribution to the rehabilitative process but are actively excluding drug users from the labor force in the belief that such people are bad business risks.

When drug users were asked how they felt about what they were doing before they started using drugs, 75% replied negative enjoyment, suggesting a causative link between the quality of life in American society and drug abuse. This link was reinforced by the opinion of all three groups that external social reasons was the main cause for failure of present solutions to the drug problem.

Utilizing the resulting study data, the author delineated two existing models that characterize the relationships among the three target populations, the Non-Model ("characterized by ambiguity, non-definition and mutually exclusive perceptions, actions and justifications") and the Externalized but Non-Reciprocal Responsibility Model (characterized by "implicit 'shifting of blame' from drug programs to employers and vice versa ...").

The author describes four other possible promising models, organized along four dimensions:

1. The addition of manpower services to drug rehabilitation agencies;
2. The addition (or increase) of rehabilitative services to manpower programs;
3. The provision to rehabilitation programs of resources by which manpower services can be purchased; and
4. The creation of new (and perhaps, temporary) agencies equipped to provide both drug rehabilitation and manpower training services.

Goldenberg, Ira, and Keatinge, Elsie. Businessmen and therapists: prejudices against employment. Contemporary Drug Problems: 363-392, Fall 1973.

DRUG	Multi-Drug
SAMPLE SIZE	60
SAMPLE TYPE	Drug Users, Employers, Drug Programs
AGE	Adults
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Boston, Massachusetts
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1971
NO. OF REFERENCES	24

SUMMARY

This 1971 study described the relationship between addiction and employment. The Commonwealth of Massachusetts, as a whole, and the Greater Boston area, in particular, were studied. The main objective was to make a preliminary study of the actual practices of both drug treatment programs and employers, with respect to drug users and ex-users.

Twenty drug programs in the Greater Boston area were chosen for intensive interview. In addition, 60 drug users and/or ex-users, and 20 employers in the Greater Boston area, were interviewed.

The results indicated a considerable discrepancy between the public rhetoric and the actual behavior of businessmen and therapists toward the drug user who seeks rehabilitation. There is an increasing separation between those who have the resources to help and those who are in need. Governmental and professional actions often aid in creating this separation.

METHODOLOGY

The first stage of a two stage data collection process consisted of a state-wide survey of all drug programs listed in the Directory of Drug Treatment Facilities, and a telephone interview with those drug programs found to be involved in rehabilitative activities. Telephone interviews were also conducted with 100 employers in the Greater Boston Area. The purpose of the interviews was to gather general information as to how jobs were being utilized to assist the user or ex-user to find personal and economic stability.

Three issues warranted special consideration. They were: (1) sources of information about drugs and drug users; (2) business attitudes and actions toward users and ex-users; and (3) attitudes and actions of drug programs toward the "world of work".

Twenty programs were chosen for intensive interview. Ten expressed commitment to the clients' employment needs, 10 had no such interests. Twenty employers were selected for intensive follow-up. Twenty drug users and/or ex-users were randomly selected from each of the 20 drug clinics. Intensive interviews were conducted with the total subject population of 60.

FINDINGS

The actions of both businessmen and therapists tended to create the kind of situation in which the drug user who wished to "go straight" was continually misled, misinformed, and otherwise manipulated so as to almost guarantee his never finding or being allowed to hold a job.

The "typical" drug user was found to have a marketable skill, which may have developed after he became a drug user. He faced double jeopardy; he was blamed for his drug use, and upon rehabilitation he was again punished for his prior sins.

The "typical" drug program believed, contrary to the findings above, that the drug user possessed no marketable skill, but if he did have one, it was acquired prior to the involvement with drugs.

The "typical" employer had never had any personal contact with a drug user; most of his information came from the mass media, which he saw as very reliable. Fifty-five percent had never had contact with drug users.

Employers were very skeptical of the addicts' chances for rehabilitation. Only 30% believed that completion of a rehabilitation program would cause the addict to be viewed differently by society.

Twenty-three percent of the drug programs thought increased drug education might help in the rehabilitation process, and 31% suggested increased funding for drug treatment programs. However, not one percent believed that counseling was the most important service, and 4% viewed vocational training as important. Drug program personnel largely viewed the individual in isolation rather than as a part of the social reality.

CONCLUSIONS

Mental-health-oriented drug programs tend to give "lip-service" to real needs, such as housing and jobs, and rarely deal with these problems in the therapeutic setting.

IV. SURVEYS OF DRUG USE AMONG ADDICTS

Nurco, David. Occupational Skills of Narcotic Addicts. Sponsored by the U. S. Department of Health, Education and Welfare, Social and Rehabilitation Services and the Maryland Psychiatric Research Center. Baltimore, Maryland, 1972. 128 pp.

DRUG	Narcotics (Author's term)
SAMPLE SIZE	99
SAMPLE TYPE	Incarcerated; Treatment (outpatient) Volunteer; Treatment (outpatient) Mandatory
AGE	Adults (21-35)
SEX	Male
ETHNICITY	75% Black, 25% White
GEOGRAPHICAL AREA	Baltimore, Maryland
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	14 (in text)

SUMMARY

This study consists primarily of an exposition and analysis of the work histories and job skills of a sample of 99 male narcotic addicts. The total sample comprised three separate subsamples of 33 cases each drawn from three different programs for addicts within the Baltimore metropolitan area: a prison (currently incarcerated) group; a mandatory supervision and treatment group; and a voluntary treatment group. All subjects were between the ages of 21 and 35 years, and the ratio of Blacks to Whites was purposely set at 3 to 1 to reflect the actual population ratio.

All subjects were interviewed according to a standardized format which consisted of over 600 items of demographic data, drug history, childhood and family background, employment history, community services history, and juvenile-criminal record. In addition, records of community service agencies and juvenile-criminal correctional agencies were checked in order to validate interview data.

Included among the many findings which emerged are: 1) that the socio-economic status of the voluntary treatment group is relatively high; 2) that Black subjects are more likely to be incarcerated following a first (juvenile) offense; 3) that addiction occurs at a relatively early age; 4) that 80% of addicts engage in some form of legitimate gainful activity post-addiction; 5) that jobs in the structural category appear to be the most stable as well as the most widely held; 6) that formally-learned (as opposed to informally-learned) job skills are rarely utilized afterward; and 7) that there is a relative lack of utilization of vocational rehabilitative services, either before or after addiction.

Finally, this report advances a preliminary conceptualization of a novel approach to the vocational rehabilitation of the narcotic addict--one based on the concept of "life style"--which attempts to relate the tasks performed and the skills acquired during the addiction phase to functionally similar tasks and skills essential to the performance of certain legitimate occupations. Three distinct addict lifestyles, viz, the street addict, the dealer addict, and the shooting gallery addict, are discussed in considerable detail, and their similarities to certain aspects of several legitimate occupations are explored. This chapter is not abstracted here.

METHODOLOGY

Structured interviews were conducted with 99 narcotic addicts from three separate treatment programs in metropolitan Baltimore:

1. Maryland House of Correction (inmate self-help program);

2. Narcotic Clinic (abstinence-type drug treatment program open only to addicts paroled from the Maryland prison system); and

3. Project A.D.A.P.T. - Anti-Drug Abuse Program with Therapy (multi-treatment modality program, hospital-administered).

Addicts were drawn from the three sources on the assumption that different types of addicts, with different occupational patterns, would be found in different programs.

The research design called for the sample to be all males, between the ages of 21 and 35 years, and 75% Black and 25% White. Age and race criteria were adopted to reflect the actual ethnic population balance in the three programs.

Thirty-three addicts were selected from each program by a systematic random sampling. All were voluntary and unpaid.

Interviews were conducted at program locations. Records of community service agencies and juvenile-criminal correctional agencies were checked in order to validate interview data. The interview schedule consisted of over 600 items assessing demographic data, drug history, childhood and family background, employment history, community services history, and juvenile-criminal record. Highly experienced interviewers were engaged and trained. They reported a high degree of cooperation within the sample. Statistical analysis consisted of 1) univariate descriptions of the total sample in terms of central tendency and variability; 2) univariate descriptions of each of the three subsamples in terms of central tendency and variability; 3) delineation of similarities and differences among the three subsamples as reflected in tests of statistical significance, where appropriate; and 4) the intercorrelation of the many variables obtained in an effort to explore theoretical as well as empirical relationships.

FINDINGS

1. Personal and demographic characteristics of the sample population

The resulting profile of the respondents revealed the following. As stated earlier, for the purposes of the study, all were male and 75% were Black and 25% White. The average age was 26.8. Predominantly, respondents were born in the Baltimore metropolitan area. Sixty-four percent reported being raised by the same parent(s) or guardian(s) until age 18. Of these parents, 91% were not addicted to drugs or to alcohol.

Typically, a respondent grew up with more than three siblings. He dropped out of school at age 16, after the 9th grade. Fifty-four percent had no juvenile court record or delinquency. The average age of first illegal drug use was just over 16 years. Only 18% served in the armed forces.

Place of parental birth showed wide variation, so that over 50% of the respondents were first generation, urban-born. Fifty-three percent of the fathers were construction, structural or laboring workers. Forty-seven of the 99 respondents had never been married.

Occupational data showed 22% unemployed and 25% working in construction and structural jobs. More than 50% lived with parents or relatives, very few of whom were drug users. Ninety percent of the respondents perceived their families as stable. Predictably, for the total study population, 80% had served a sentence in prison.

The study also analyzed differences in the three treatment groups and race differences in the total sample. In general, black respondents (75% of the sample) had a more stable home life, were older when they first used drugs, had a higher rate of unemployment, a lower rate of addiction when they first entered a drug program and a higher rate of prison confinement on first offenses.

2. Work history and occupational status

Prior to addiction, nearly half the respondents were unemployed. Of those employed, numbers were fairly equally distributed in the categories of clerical and sales; service; housing, machine trades, and bench work; structural work; and miscellaneous.

Subsequent to addiction, unemployment was less than half the previous figure. Nearly one-fourth of the sample was now employed in structural work. Five percent were now employed in professional, technical and managerial positions.

Prior to addiction, only 14 of the 99 had been continuously employed for at least 24 months; after addiction 20 of the 99.

Respondents were asked their reasons for leaving the job which they had held longest. For pre-addiction jobs, 50% left of their own volition for negative reasons (personnel conflicts, drug use, incarceration, family problems). Chief among these was dissatisfaction with the work situation in one of its aspects. Thirty-five percent left for positive reasons (better job, job training program, self-employment, armed forces). Only 15% of all terminations were employer-initiated.

For post-addiction jobs, over 50% again left for negative reasons of their own, 21% for positive reasons, and 20% were employer-initiated.

Current occupational status was also assessed. The voluntary treatment group had the highest number of respondents in the professional, technical and managerial category but also the highest number of unemployed.

In job skills, the voluntary treatment group reported considerably fewer skills than either the prison or mandatory supervision groups; yet this group had the most stable job history. The prison group reported the highest number of skills acquired through both formal and informal training. The voluntary group acquired twice as many skills informally as formally.

Of the total 71 skills learned formally, 45 were never used. Of 82 skills learned informally, only 35 were never used. The most frequently occurring occupational category of fathers of respondents was structural.

After addiction respondents received twice as many vocational services as before. These services included counseling, testing, job placement, vocational rehabilitation, and job training. Almost no job training was received by any members of the three groups during incarceration.

CONCLUSIONS

Addiction usually occurred at a relatively early age, at a time when respondents were unemployed or employed in relatively unskilled jobs. Yet, addiction did not preclude subsequent employment, since nearly 80% were employed thereafter. The most frequently held jobs were in the structural category, jobs frequently characterized by modest educational demands and which typically involved physical labor out-of-doors. These jobs may conform with the life styles of many addicts, since addicts employed in the structural area also had the greatest degree of job stability. Termination of jobs typically appeared to have been for respondent-initiated reasons rather than for employer-initiated ones.

Differences among the three treatment groups studied were most evident between the voluntary treatment group, on one hand, and the prison and mandatory supervision group, on the other. Members of the voluntary group were more likely to be employed in the higher occupational categories or to be unemployed altogether. Other factors contributed to the inference that members of the voluntary group were, on the average, of a higher socio-economic status.

A majority of both formally and informally learned job skills were never subsequently used. Those which were most frequently used related to structural work occupations.

The data suggested that very few vocational rehabilitation services were utilized either before or after addiction. Only 7 individuals out of the total sample of 99 received vocational rehabilitation services. The author recommends that correction of this situation be given high priority.

Levy, Stephen J. A study of drug-related criminal behavior in business and industry. New York: The Training for Living Institute, June 1972. 20 pp.

DRUG	Multi-Drug, Opiates
SAMPLE SIZE	95
SAMPLE TYPE	Volunteer, Treatment (inpatient)
AGE	Adults (average age 23)
SEX	74 Male, 21 Female
ETHNICITY	48 Black 20 White 25 Puerto Rican 2 Other
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

SUMMARY

This study was undertaken to determine:

1. some characteristics of drug abusers in business and industry;
2. whether heroin addicts can hold jobs;
3. what types of crimes drug abusers commit on the job.

Questionnaires were administered to 95 volunteers from the therapeutic communities of Daytop, RETURN, SERA, and Harlem Confrontation House.

The resulting profile of the subjects included data on sex, age and ethnicity; average time on drugs and in treatment; educational level; major drug use; annual income; and types of jobs held prior to program entry.

The results show that heroin addicts have held down jobs without detection and that more than one-third of the subjects had stolen goods and materials and less than one-third had stolen cash or checks.

The study includes 6 specific recommendations for employers to consider with regard to drugs. An appendix lists the job types held by the subjects of the study.

METHODOLOGY

Ninety-five volunteer subjects were drawn from four voluntary residential therapeutic communities in New York City: Daytop, RETURN, SERA, and Harlem Confrontation House. All the subjects reported criminal behavior on the job prior to treatment and all were drug users while employed prior to treatment.

An anonymous questionnaire was administered at a special seminar held in each treatment facility. The data was collected by the author of the study and several assistants. The assistants were graduates of similar treatment programs. Several anonymous audio tapes and one video tape were made of the subjects freely discussing their drug-related criminal activities on the job.

FINDINGS

1. The profile of the typical subject was male, a member of a minority group, in his early twenties, a high school graduate, had a family or individual income of between $5,000 and $10,000 annually, was on drugs for approximately six years, and was someone who willingly entered a voluntary drug-free rehabilitation program.

Eighty-seven of the 95 subjects cited heroin as the major drug used. The drugs cited by the remaining eight subjects were LSD, amphetamines, cocaine and pills.

The 95 subjects reported having held 89 different job categories, ranging, for example, from mail clerk to plant manager to nurse's aide. Ninety-one reported using drugs during working hours.

Four types of criminal activity on the job were revealed:

1. possession and use of narcotics and other drugs on the job (40 of the 91);
2. selling drugs to other employees (48 of the 91);

3. stealing goods from the job site and selling them (37 of the 91); and

4. stealing cash or checks from other employees and employers (28 of the 91).

On a scale of 1 (very knowledgeable) to 15 (very unknowledgeable), mean subject response to three questions was as follows:

> How knowledgeable do you think your employers are about the drug scene in their own companies? -- 11.21.
>
> How widespread was serious drug abuse (narcotics, etc.) in the company? -- 9.70.
>
> How widespread was drug experimentation (marijuana, etc.) in the company? -- 8.10.

CONCLUSIONS

Some heroin addicts not only hold down a variety of jobs but their drug use goes undetected for long periods of time. None of the employers who fired those in the sample (30%) gave drug abuse as the reason for dismissal; rather, poor performance, lateness, absenteeism, etc. were cited.

Only crimes against property and crimes concerning possession and sales of drugs were reported by the subjects, implying that crimes against persons are restricted to street addicts and non-addict criminals.

The ratio of males to females in the sample of previously employed drug users was consistent with the ratio reported for drug treatment programs (3 to 1).

The sample indicated that many addicts and drug abusers come to the work force directly from high schools and colleges where they have been exposed to and participated in drug usage.

The subjects in the study indicated that both drug experimentation and serious drug abuse are far from uncommon in the more than 95 business firms that employed them.

V. DRUG USE IN THE LABOR FORCE

Chambers, Carl D. Differential Drug Use Within the New York State Labor Force. Mamaroneck, N.Y.: Starch/Hooperating/ The Public Pulse, 1971. 41 pp.

DRUG	Multi-Drug
SAMPLE SIZE	7500
SAMPLE TYPE	General Population
AGE	14+
SEX	Both Male and Female
ETHNICITY	White, Non-white
GEOGRAPHICAL AREA	New York State
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	August 1-September 5, 1970
NO. OF REFERENCES	11

SUMMARY

The Division of Research for the New York State Narcotic Addiction Control Commission undertook a survey of drug use within the general population of New York State in 1970. Some 7500 persons age 14 or older were interviewed in their homes by trained interviewers using a questionnaire designed to elicit information about the use of both legal and illegal drugs.

In 1971, the NACC published the resulting report, An Assessment of Drug Use Within the General Population. The study was

accomplished by NACC in collaboration with the custom market research divisions of Daniel Starch and Staff, Inc.

A supplementary analysis of the resulting data was done to document the use of drugs by members of the labor force and to ascertain differences in types of use among the various occupational groups. Differential Drug Use Within the New York State Labor Force is the report of this analysis.

Interviews were conducted in five age groups in 17 regions of the state and the resulting data weighted to represent ages and sexes in their true population proportions. Trained interviewers gathered responses in three areas: general drug use, knowledge and attitudes about drug use and users, and uses of specific drugs by respondents or respondents' acquaintances. Projections for the total state population were made from the resulting data.

The patterns of use revealed in the labor force were the result of dependent-independent manipulation of two sets of variables: drugs and occupational groups. Twelve drugs were divided into legal and illegal categories. Occupational groups included seven classes of currently employed and two classes of not employed individuals.

The resulting statistics revealed that of the various occupational groups into which employed people fall, sales workers reported the highest rate of on the job use of barbiturates, pep pills, diet pills, marijuana, LSD, methedrine, and heroin. Clerical and other white collar workers reported the highest rate of on the job use of minor tranquilizers.

The most frequently used of the legal drugs among all occupational groups except sales workers was relaxants/minor tranquilizers. The most frequently used of the illegal drugs for all groups was marijuana. Service and protective workers reported the highest percentage of on the job use of relaxants/minor tranquilizers. All were over 25 and white, most were female and most were high school graduates. Sales workers reported the highest percentage of on the job use of marijuana. Most were under 25, white, female and high school graduates.

When queried about their attitudes toward drugs, 51.7% of the total respondents agreed that a lot of people need drugs to cope with stress; 71.1% disagreed that there is nothing wrong with smoking marijuana as long as a person does so in moderation.

METHODOLOGY

Sample

Interviews were conducted with 7500 individuals in five age groups: 14-17, 18-24, 25-34, 35-49, 50 and over. Weights were applied

during data processing to represent ages and sexes in their true proportions in the total population.

Equal numbers of males and females were interviewed. A cross-section of the state was obtained by survey of 17 regions. The sampling procedure combined elements of both probability and quota techniques.

Respondent selection, accomplished in accordance with standard statistical procedures, included two stages: (1) stratification by size of regional communities based on U.S. Census data and (2) subdivision of the communities into areas of equal population for interview assignment. Interviewers followed a specially designed procedure for actual respondent selection and interviewing. At least one-third of each individual interviewer's work was validated by later contact with the respondents.

Sample Limitation

The sample limitations recognized the exclusion of drug users so dysfunctional that stability of residence was not maintained.

Interviewers

Interviewers were selected and trained to match the demographic characteristics of interviewing locations. For example, individuals reared in ghetto areas were used in those areas; ex-addicts were used in areas where use of illegal drugs was believed to be high. Interviewers were trained in drug jargon.

Interview Schedule

The schedule content was determined by the NACC Division of Research; the format was a collaborative effort with the market research company. The schedule was divided into three main sections:

1. general drug use for nonspecific reasons
2. knowledge and attitudes about specific drug use, drug users and regulation laws
3. respondent's use of 17 classes of drugs and knowledge of other persons' uses. Frequency of use was classified as (a) non-user, (b) former user, (c) infrequent user, and (d) regular user.

This section also probed as to the way the drug was obtained, where it was used and, in the case of a legal drug, whether it was used as prescribed.

Respondents were provided with a card listing 17 drugs and drug groups with appropriate examples of specific drugs. Provisions

were made for accurately including responses concerning drugs not indicated and compound drugs.

Respondents were provided with written assurance of anonymity and confidentiality from both the NACC and the research company.

The design strategy took into account three factors affecting under-representation of actual drug use: (1) natural forgetfulness in recalling a wide variety of drugs, (2) inability to identify prescribed drugs and (3) reluctance to discuss personal involvement in a socially unacceptable or illegal activity.

Demographic profiles were determined by a fourth section of the questionnaire.

Interviews were conducted from August 1 through September 5, 1970. Ninety-eight percent of the 7500 assigned interviews were completed.

Estimating Procedures and Standard Error of Percentage

A weight was developed for each person interviewed such that all respondents' weights jointly reflected the population age 14 years and over of New York State. All statistics were reported with one standard error or deviation which means at a 68% confidence level. For example, the survey estimated that 3.8% of the New York State population over 14 regularly use minor tranquilizers. The chances are 68 in 100 that this figure is within 0.2 percentage points of the value obtained had a complete census been carried out.

FINDINGS

Statistics on the use of drugs by the sample population were compiled in two categories with subcategories in each:

1. Legal Drugs

   Barbiturates
   Non-Barbiturate Sedative/Hypnotics
   Relaxants/Minor Tranquilizers
   Major Tranquilizers
   Antidepressants
   Pep Pills
   Diet Pills
   Controlled Narcotics

2. Illegal Drugs

   Marijuana
   LSD
   Methedrine
   Heroin

The sample population was broken down into two occupational categories with sub-categories in each: (1) currently employed (professionals; technical workers; managers and owners; clerical and other white collar workers; skilled and semi-skilled workers; unskilled workers, service and protective workers; sales workers; and farmers), and (2) currently not employed (housewives; and other not employed).

The survey sought to assess four factors: the prevalence and incidence of the use of a drug throughout the labor force, the demographic characteristics of the regular drug users within each occupational group, the summary distributions of all the regular users within each occupational group, and the attitudes toward drug use and drug uses within each occupational group.

Prevalence and Incidence of Drug Use

The prevalence (ever used) and incidence (current use) of drug use has been analyzed according to categories of frequency of use: never used, former user (no use in 6 months), infrequent user (1 but not 6 times per month), and regular user (at least 6 times per month).

Within each drug class the occupational group having the highest percentage of regular use within that group was: barbiturates--sales workers (12.3%), non-barbiturate sedatives/hypnotics--unskilled workers (1.8%), and not employed housewives (1.8%), relaxants/minor tranquilizers--clerical and other white collar workers (5.7%), major tranquilizers--sales workers (2.1%), antidepressants--(only three groups reported regular use) clerical and other white collar workers (.3%), skilled and semi-skilled workers (.3%), and unskilled workers (.3%), pep pills--sales workers (1.4%), diet pills--sales workers (3.6%), controlled narcotics--sales workers (.9%), marijuana--sales workers (8.6%), LSD--sales workers (2.6%), methedrine--sales workers (.7%), heroin--sales workers (2.1%).

None of the workers in the high percentage occupational groups report on the job use of non-barbiturate sedative/hypnotics, major tranquilizers, antidepressants, and controlled narcotics. All of the workers in the high percentage occupational groups report on the job use of pep pills, methedrine and heroin. Some percentage of workers in the high percentage occupational groups in the other drug categories report on the job use of those drugs.

Demographic Characteristics of the Users

For each occupational group, the study provides statistics on age, ethnicity, sex, education and any drug use while at work.

For professionals, technical workers, managers and owners, 20.8% reported using marijuana at work, 72.9% were age 25 or above, 87.5% were white, 58.3% were male and 93.8% were high school graduates. For unskilled workers, 35.3% reported using marijuana at work, 88.2% were younger than age 25, 76.5% were white, 76.5% were males and 52.9% were high school graduates.

Distribution of Regular Users Within Occupational Groups

The summary analysis within each occupational group of the drugs most frequently used on a regular basis are as follows:

professionals, technical workers, managers and owners: relaxants/minor tranquilizers--36% reported taking them at work

clerical and other white collar workers: relaxants/minor tranquilizers--3.7% reported taking them at work

skilled and semi-skilled workers: marijuana--22.1% reported taking it at work

unskilled workers: marijuana--35.3% reported taking it at work

sales workers: barbiturates--11.3% reported taking them at work

Attitudes Toward Drug Use and Drug Users

Respondents were asked six questions to assess their attitudes toward drug use and drug users. In employed occupational groups, unskilled workers had the largest percentage of agreement that drug use should be a matter of personal decision. Largest percentages of agreement to the other questions were: clerical and other white collar workers: a lot of people need drugs to cope with stress; farmers: drug addicts should be treated as sick people and not criminals; farmers: strict and harsh punishment of drug abusers will keep others from using drugs; professionals, technical workers, managers and owners: education is the best way of preventing drug abuse; and sales workers: there is nothing wrong with smoking marijuana as long as a person does so in moderation.

CONCLUSIONS

The numerical projection of the survey findings into the total state population, data drawn from the author's "Highlights of the Report", are:

205,000 employed people are regularly using barbiturates;
72,000 use sedative/hypnotics;
157,000 use minor tranquilizers;
55,000 use major tranquilizers;

13,000 use anti-depressants;
51,000 use prescription pep pills;
117,000 use prescription diet pills;
19,000 use narcotics other than heroin;
293,000 use marijuana;
25,000 use LSD;
10,000 use methedrine; and
34,000 use heroin.

VI. PROGRAMS

Rush, Harold M. F. Combating employee drug abuse. The Conference Board RECORD, November 1971. pp. 58-64.

SUMMARY

There seem to be several main reasons for the increasing drug problem in the general work force: young people in the work force grew up in the "drug culture," addicted Vietnam veterans are returning, and drug usage has spread among the middle class.

Because drug usage among employees is a relatively new phenomenon, most companies are not prepared to cope with the problem. Most companies have not developed firm policies on the issue of drug abuse.

Many companies are beginning to develop programs of education for employees, and particularly managers; these programs often reflect the company's position regarding drug abuse--some firm, some permissive. But regardless of the nature of the position, most companies feel that some sort of indoctrination for employees is necessary. They may use pamphlets, lectures, seminars, distribute newsletters, or show films, and most attempt to explain the dynamics and multiple factors that lead to dependency on drugs.

Because 1/2 of the known hard-drug addicts in the United States are to be found in metropolitan New York, managers elsewhere feel that their counterparts in New York City have greater expertise in this area. Chase Manhattan Bank in New York is one company that has developed a systematic program on drug abuse. The program includes training and education as well as screening and identification of addicts or drug abusers.

Chase Manhattan has 20,000 employees in metropolitan New York and, in addition, large numbers work at the branches per diem on heavy banking days. There is a high turnover in these clerical jobs.

Because the company is located in New York, is large, with a considerable number of young people hired each year, and is located in a heavy drug-pushing area, one would imagine a high incidence of drug abuse. However, the incidence of actual drug abuse among those on the payroll is small, and the bank has rigid controls to keep it small.

These controls include interviewing and medical screening of applicants, medical exams, tightened security controls for employees suspected of drug abuse, enforcement of the company's formal policy statement on drug abuse, and employee and supervisory education on drugs and drug abuse.

The bank has also introduced a pilot program to screen out addicts. This means a special drug test as part of the urinalysis given in pre-employment physicals for job candidates under 30. If he confesses drug usage, he is not hired.

Since the beginning of 1971, drug screening urinalyses performed on all applicants regardless of age have involved the presence of drugs in the system of 1.4% of those examined.

If a supervisor suspects an employee of drug abuse he refers him to his area personnel officer or the counseling section in central personnel.

If the employee admits to drug abuse, he is discharged immediately. If he denies it then he must submit to urinalysis to remain on the payroll.

The bank takes the same attitude towards "soft" as well as "hard" drugs. If the employee is discharged for drug abuse, the staff will help to obtain treatment in the community.

In 1970 only a handful were discharged for drug use. There was an increase in 1971.

The company has also issued a brochure called "Drugs," a copy of which was sent to the home of every employee. Aimed at parents, the illustrated brochure primarily discusses dangers and types of drugs. It also lists agencies and organizations around metropolitan New York where help with drug problems may be obtained.

The focus of the bank's drug program is on prevention, and the main thrust of the program is supervisory education.

The bank has also established drug education seminars. They lasted for one month in 1970, and all bank supervisors were required to attend. These seminars offered general, and medical, information on drugs. Two films on drugs were shown, both illustrating the fact that drug abuse is not just a ghetto problem, but cuts across socio-economic and racial lines.

Executives at Chase Manhattan feel their program is a good beginning, since it is comprehensive and touches all segments of the work force. It will be modified and expanded as the need arises and as resources are available. They hope that such a program will guarantee that the staff will work in an environment free of sellers, traffickers, and users of drugs.

Rush, Harold M. When a company counsels the drug abuser. The Conference Board RECORD. May 1972, 11-15.

SUMMARY

This paper reports an ongoing project undertaken by Pitney-Bowes in 1967. This carefully planned and managed program was set up to deal with problems of drug abuse among company employees. When incidents of drug problems on the job were accidentally discovered, the company determined the extent of the problem. It became clear, as a result of a questionnaire administered to exempt and non- exempt employees, that there was a gap in knowledge between the two classes of employees. Consequently, the company put together a full-day seminar, a portion of which was devoted to drug addiction. Later, brochures were distributed to all employees. A "formal policy" regarding drug abusers was established by management, but the policy remains known only to the top management within the company.

PROGRAM DESCRIPTION

Supervisors who spot signs of a drug problem, rather than confronting the employee, refer him to the counseling section of the personnel department. The problem is then handled by counselors and the company medical staff. An employee who is abusing drugs and wants to stay with the company must get professional help.

The important concerns in this treatment for drug abusers are:

- Discover the underlying reasons for the problem
- Determine the type of treatment best suited to the individual's situation
- Know the types of drugs involved, duration and frequency of drug use, home life, emotional outlook
- Available rehabilitation service.

Those who need detoxification, in addition to medical and psychological treatment, must leave work, although they can be rehired after a minimum of one year.

If an employee wishes to return to work after rehabilitation, and the outside agency and the company are in agreement, Pitney-Bowes will attempt to rehire but usually not in the same department.

Once back on the job, the former addict is treated like any other employee with no concessions for unusual behavior or problems of productivity. Spot check urinalyses are given and if evidence of drugs is found, counseling is given. The employee is suspended if second evidence of drugs is discovered.

Research on the company's experiences with drug abuse shows some discernible demographic tendencies. Since the program's inception no cases have appeared in managerial ranks. Hard drug use is more prevalent among whites, males, and the 17-22 age group in this company's experience.

The company trains its counselors as para-professionals, knowledgeable in the area of drug abuse, skilled in coaching and counseling.

CONCLUSIONS

Pitney-Bowes sees itself as closely connected with the community in which it is located. It feels that the drug problem within the company cannot be separated from the same problems within the community. Therefore the counseling resources available on the job must be extended to meet the needs of the families of its workers. Otherwise a false dichotomy exists between company and community. This company, with a strong social conscience, feels this to be a legitimate concern of a company trying to help those in trouble.

Levy, Stephen J., and Ramirez, Efren. Guidelines for Management-Labor Team Efforts: Approaches to Drug Abuse Education and Prevention in Industry. New York: The Training for Living Institute and the Institute for Existential Therapy, December, 1971. 18 pp. (16 references)

SUMMARY

Several program suggestions designed to include some or all segments of the business community are presented. The proposals are meant to serve as guidelines which can be adapted to the needs of the individual company. A management-labor team approach is suggested rather than the typical seminar conducted by "experts" where either the expert is very knowledgeable about drugs, and knows little about the problems of the business world, or the experts are people from within the ranks of industry who know little about the problem of drugs.

Three tracks are suggested along which companies can model their efforts to achieve joint policies and programs between management and labor. Track one has been called the hard line approach. It is primarily concerned with job inefficiency. As a first step it establishes tight screening procedures for new employees, such as interviews, medical examination, and laboratory tests, particularly urine analysis. No sale, use, or possession of illegal drugs is tolerated in the work setting. If the employee is not abstaining, he is immediately dismissed. The program does not provide for any in-house counseling. Drug users, or suspected drug users are put on probationary status and closely watched by supervisory personnel. They are also subjected to frequent laboratory and medical examinations. Supervisory personnel are trained in the techniques of behavioral observation so as to know the warning signs of drug related activities. Optional components of the program are educational sessions and rap sessions among employees.

Track two is the liberal humanistic approach. An amnesty policy exists for all those who wish to come forth and ask for help. Employees are evaluated, referred to the proper treatment modality, given a leave of absence, and reinstated with full seniority upon successful completion of treatment. If an employee refuses to go for help, his employment is terminated. The returning ex-addict can

work as a role-model on the counseling team. These persons function as change agents within the company and thereby increase their value as employees.

Track three, the combined approach, includes aspects of both hard line and liberal humanistic approach. It includes screening procedures for new and regular employees, probationary periods for those who are using or are suspected of using drugs, and an abstinence program with tight supervision. A parallel program includes orientation and education programs, and a counseling service conducted at a confidential level.

Federal, state and private agencies, rather than individuals, are suggested as resources for companies wishing to implement drug abuse education and prevention programs.

Hine, C.H., and Wright, J.A. A program for control of drug abuse in industry. Occupational Health Nursing, 18:17-18, 41, April 1970.

SUMMARY

The authors describe the process of developing a program for the control of drug abuse in industry which has been used in a dozen industries. An educational plan was prepared to reach members of management and their health teams who were found to be not significantly familiar with the problems of drug abuse. This included a narrative description of the patterns of drug abuse, misuse of therapeutic agents, the different classes of drug which are most commonly used, the legal issues relative to possession and sale, and the signs and symptoms that these different drugs produce.

Most of the companies involved had a policy concerning the hiring, treatment and dismissal of alcoholics. No consistent policy regarding the handling of the drug problem was found. It was recommended that management should become familiar with the legal implications of the sale, use and possession of drugs, review its philosophy regarding these matters, and form and make known policies concerning: (1) the hiring of known drug addicts, (2) the establishment and availability of preventive programs, and (3) drug abuse as a reason for dismissal from employment.

Policies adopted by different companies were found to follow a generally similar program with individual deviations in the sophistication of their personnel and medical groups. Most frequently plans evolved with the following features: (1) prohibiting the sale of abuse drugs on the premises, with full cooperation with law enforcement agencies for the detention and punishment of persons guilty of this offense; (2) instituting disciplinary action varying from reprimand to dismissal for working under the influence of abuse drugs; (3) providing rehabilitative help for any employee who voluntarily asked for counseling and assistance regarding a drug problem.

Observation of unusual behavior among employees was considered the first line of detection. A list of signs and symptoms which were suggestive of the influence of common abuse drugs was prepared including decreased concern, slowed coordination, decreased intellectual function, odor, red eyes (hallucinogens); lack of attention,

marked drowsiness, ataxia (hypnotic sedatives); agitation, rapid speech, dizziness, dilated pupils (stimulants); and drowsiness, mental clouding, apathy, inability to concentrate, decreased activity (narcotics).

This information was reviewed in depth, first with security forces, who were instructed to prevent such affected individuals from entering the premises and to report the incident to the supervisors. More detailed points were reviewed with members of the health team.

A chemical detection program (urine testing) was also recommended for certain groups of persons: (1) those involved in serious accidents, especially when personal injury was sustained; (2) frequent visitors to the medical department who had symptoms of maladjustment which could be related to drugs; (3) persons with frequent absences, especially on Mondays and Fridays, who did not have a problem with alcoholism; (4) persons with altered behavior whose appearance suggested the necessity of further investigation; (5) persons with adjustment problems who were having frequent altercations with their fellow employees and who resisted supervision; (6) persons suspected of being involved with the sale and distribution of drugs; and (7) persons who performed poorly on the job and were involved in excessive spoilage.

The preventive program is based on establishing educational programs concerning drug problems for employees and their families. The medical department should develop a counseling service regarding rehabilitation procedures, and the referral of persons for ambulatory treatment or to sanitariums when required.

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The numbers in the indexes refer to the unique identification code found in the upper right-hand corner on the first page of each abstract. Roman numerals reference categories from the Table of Contents; Arabic numerals reference abstracts within categories. It should be pointed out that a given index term refers to an entire abstract rather than to pages within an abstract.

The keyword terms selected for the indexes are those terms used in the literature; no terms were inferred. The most specific term was used whenever possible. Thus, some material on marijuana will be found under that term but other material may be found under the term cannabis. Similarly, studies of heroin use may be indexed under heroin but also under opiates.

For convenience to the reader, the indexes have been divided into the following five sections:

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Includes general and specific names of all drugs mentioned in the abstract, as used by the authors of the document.

Sample Types

Terms which describe as specifically as possible the sample population studied.

Geographic Locations

Organized by state, the location where the study was carried out; includes also names of universities, schools, drug programs, committees, etc., in the order in which they occur in the abstracts.

Subjects

Terms which describe the subjects or concepts of the studies; included also are names of specific data collection instruments, evaluation tools, and questionnaires.

Authors

All authors named in the citation to each abstract are listed in the author index; however, this does not include all authors of the materials abstracted since documents with more than two authors have been cited with et al.

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ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION
PUBLIC HEALTH SERVICE

NATIONAL INSTITUTE ON DRUG ABUSE
11400 ROCKVILLE PIKE
ROCKVILLE, MARYLAND 20852